

PUTTING THE PIECES TOGETHER:
Controlling Lead Hazards
in the Nation's Housing

REPORT

Lead-Based Paint Hazard
Reduction and Financing Task Force

The National Lead Information Center provides information and advice about lead-based paint hazards. The Hotline—1-800-LEAD-FYI—accepts requests for a packet containing general information about lead. The Clearinghouse—1-800-424-LEAD—provides both general and technical assistance on topics such as lead poisoning prevention and proper methods of hazard evaluation and control. Copies of the Task Force Summary and the Final Report are available through the Clearinghouse and through HUDUSER, 1-800-245-2691.

The Task Force on Lead-Based Paint Hazard Reduction and Financing is composed of individuals representing a broad range of organizations and institutions involved with issues concerning lead-based paint in housing. The Task Force report does not represent the view of the United States government, its departments, agencies, or other offices.



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Task Force on Lead-Based Paint Hazard Reduction and Financing

The Task Force on Lead-Based Paint Hazard Reduction and Financing was mandated by Title X of the Housing and Community Development Act of 1992. The Task Force is comprised of 39 men and women representing a diversity of constituencies, opinions, professions, training, and experiences yet having in common a dedication and commitment to helping reduce the hazards associated with lead-based paint. Task Force members were appointed by Department of Housing and Urban Development (HUD) Secretary Henry Cisneros on the basis of their individual expertise. Section 1015 of Title X requires that “The Task Force shall include individuals representing the Department of Housing and Urban Development, the Farmers Home Administration, the Department of Veterans Affairs, the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Environmental Protection Agency, employee organizations in the building and construction trades industry, landlords, tenants, primary lending institutions, private mortgage insurers, single-family and multifamily real estate interests, nonprofit housing developers, property liability insurers, public housing agencies, low-income housing advocacy organizations, national, State and local lead-poisoning prevention advocates and experts, and community-based organizations located in areas with substantial rental housing.”

In a series of meetings of the full Task Force, three major committees, and a number of ad hoc working groups, Task Force members worked to reach consensus on recommendations for dealing with the complex

problem of lead hazards in housing. Despite the diversity of interests and backgrounds, Task Force members worked hard and long to reconcile their differences and to deal positively with the reality of lead-based paint hazards. At the same time they recognized the need to set priorities, to ensure continued availability of affordable housing, and to address constraints faced by the private sector.

Many of the Task Force’s 59 recommendations were adopted unanimously, and each was approved by at least a two-thirds majority of those present and voting. All members of the Task Force were offered the opportunity to submit supplemental views, although an effort was made to incorporate the range of perspectives into the report itself. However, it should be noted that Task Force members were not asked to endorse every statement in the text. The fact that such a divergent group achieved substantial agreement gives added weight to the conclusions and recommendations set forth in the report.

The Task Force would like to acknowledge the dedicated service and active involvement of the many individuals and organizations without which the work presented in this report could not have been accomplished. Members of the Task Force gave tirelessly of their time, many giving hundreds of hours working on standing and ad hoc committees to make it possible for the Task Force to succeed in reaching agreement to the extent that it has. The Task Force Chair expresses special thanks to the chairs and co-chairs of the Implementation, Finance, and Insurance and Liability committees who served as members of the Steering Committee.

The Task Force would like to thank HUD and the Environmental Protection Agency (EPA) for both financial support and technical expertise, without which the Task Force could not have met its commitments. We particularly want to recognize the coordination and management provided by Jonathan Jacobson of EPA and Ruth Wright of HUD. In addition, the Task Force meetings were made possible by the logistical support of Ben Pierce, Diane Edwards, and Ellen Ferguson of Battelle Memorial Institute. The staff of ICF Kaiser International, led by Anita Rechler and Michael Berg, provided essential background research and working papers and worked closely with the Task Force to develop the text of this report. Key ICF staff contributing to this report included Vijetha Dasappa, Amy Jones, Martin Marchaterre, Dora Moore, Rick Nevin, Eric Oetjen, Janet Pershing, David Roman, and Karen Sedivy.

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Putting the Pieces Together: Controlling Lead Hazards in the Nation's Housing

The members of this national Task Force have reached broad agreement on a comprehensive approach for controlling lead-based paint hazards in private housing, despite the extremely varied backgrounds and perspectives of its members, and despite the often competing interests they represent. The Task Force finds that the current system is not working for parents, children, private property owners, lenders, insurers, or the nation at large. Fundamental changes are needed—and Task Force members are convinced that the almost universal dissatisfaction with the status quo sets the stage for changes in the near term.

The Task Force envisions a system that will protect children from developing elevated blood lead levels, preserve our stock of affordable housing, and wisely invest scarce resources, both public and private. The Task Force approach is built on:

- Benchmark national standards for maintenance and lead hazard control in private housing to make clear property owners' responsibilities, including standard responses when children are found to have elevated blood lead levels;
- Expanded and more responsive private financing;
- Targeted public financing for hazard controls in economically distressed housing occupied by low-income families;
- Changes to the liability and insurance systems to provide incentives for action and expedited compensation to injured children; and
- Public awareness initiatives to better inform all affected parties.

The Task Force has taken great care to develop strategies that work together to form a comprehensive, health-protective, cost-effective, and feasible approach to solving the most significant environmental health hazard facing America's children. The Task Force relies on a careful balance among education, private sector

forces, and government regulation and enforcement. Many recommendations are not only interrelated but also interdependent. Developing this balance was a complex and difficult task, and the Task Force believes that it has reached a sound and workable solution. It strongly cautions, therefore, against misuses of this report that “cherry pick” the recommendations to serve a particular interest.

THE TASK FORCE'S MANDATE

Title X of the Housing and Community Development Act of 1992 addresses the control of lead-based paint hazards in federally assisted housing. It also provides for consistency and quality control in evaluating and controlling lead hazards in all housing. At the time of sale or rental of privately owned housing built before 1978, the year the Consumer Product Safety Commission banned the residential use of lead-based paint, Title X requires delivery of an educational pamphlet and disclosure of any known lead-based paint hazards. Title X also requires that lead-based paint hazard evaluation and abatement activities in privately owned housing be carried out by certified contractors.

In enacting Title X, Congress recognized that it did not have solutions for the difficult problems posed by lead-based paint in private housing. Congress directed the Secretary of the Department of Housing and Urban Development (HUD), in consultation with the Administrator of the Environmental Protection Agency (EPA), to create a Task Force to make recommendations on lead-based paint hazard reduction and financing. Secretary Cisneros appointed individuals to this Task Force, representing the spectrum of organizations and interests affected by lead-based

paint in private housing. Beginning in November 1993, the Task Force held seven meetings that were open to the public and that included opportunities for public input at each meeting. In addition, it held an all-day public hearing in Chicago. This is the Task Force's final report.

THE PROBLEM: AN OVERVIEW

Despite dramatic reductions in blood lead levels over the past 15 years, lead poisoning continues to be a significant health risk for young children. The recent reductions in blood lead levels are attributable largely to removing lead from gasoline and food cans. By contrast, relatively little has been done to reduce hazards from lead-based paint in pre-1978 housing and from lead-contaminated soil. It is time to address these hazards.

The status quo threatens the housing system as well as children's health. Housing owners do not have clear guidance as to their responsibilities; insurers are increasingly unwilling to provide lead liability coverage; the tort system is operating inefficiently and randomly for lead poisoning claims; and some hazard control methods are so costly that, if broadly required, they would drive millions of housing units into disinvestment and abandonment. In response to this situation, many owners either do nothing or restructure their holdings to be lawsuit-proof, and of course neither of these results is desirable for either children or housing.

Changes are needed in virtually every aspect of our nation's approach to lead-based paint hazards: how we maintain and renovate housing; how we finance renovation activities; how our legal and insurance systems respond to injured children; how we educate citizens about lead hazards; and how we respond when children are discovered to have elevated blood lead levels. Moreover, these changes must be coordinated in order to harness market forces and avoid unintended adverse consequences.

Finally, the Task Force recognizes that public financing will be necessary to control lead-based paint hazards in the older, economically distressed housing where much of the problem is concentrated.

The Problem: Lead Hazards

Lead is a naturally occurring element that is toxic to humans of all ages when taken into the body through ingestion or inhalation. However, lead is most hazardous to the nation's roughly 20 million children under the age of six, whose still-developing nervous systems are particularly vulnerable to lead and whose normal play activities expose them to lead-contaminated dust and soil. High levels of lead in the blood of young children can produce permanent nervous system damage. Moreover, recent research indicates that relatively low blood lead levels (that is, levels that until recently were not thought to be problematic) can produce significant nervous system effects, such as reduction in intelligence and attention span, reading and learning disabilities, and behavior problems. These relatively low blood lead levels are typically not accompanied by overt, identifiable symptoms. For these reasons, there has been an increase in blood lead testing of young children to detect lead problems at an early stage for individual attention and to guide improved strategies for prevention.

The Problem: Elevated Blood Lead Levels in Young Children

Of the 20 million young children under age six, an estimated 1.7 million (almost 9 percent) have blood lead levels at or above the "level of concern" established by the Centers for Disease Control and Prevention (CDC). If a particular neighborhood is found to contain significant numbers of young children with blood lead levels above the "level of concern," the CDC guidelines call for neighborhood-based strategies aimed at prevention through education and broad-based efforts to reduce lead exposures.

Children with elevated blood lead levels are not distributed evenly; rather, they are disproportionately located in older neighborhoods in the nation's central cities. Children living in poverty are four times more likely to have elevated blood lead levels than children from wealthier families, and African-American children are four times more likely to have elevated blood lead levels than White children. Nationwide, more than one-third of African-American children living in large central cities have elevated blood lead levels.

Of the 1.7 million young children with blood lead levels above the “level of concern,” an estimated 500,000 have blood lead levels at or above the level at which CDC calls for an “environmental investigation.” This involves an assessment of lead exposures to the particular child, usually performed by staff of the local health department, plus remediation of the source of these lead exposures. These 500,000 young children represent roughly 2.5 percent of the total population of children under age six.

The Problem: Pathways of Childhood Lead Poisoning

Ingestion of lead-contaminated surface dust is the most common pathway of childhood lead poisoning. Due to its small particle size, lead dust may not be visible to the naked eye and is difficult to clean up. Most commonly, lead dust gets on children’s hands and toys and then into their bodies through normal hand-to-mouth activity. This dust comes from lead-based paint that is deteriorating (chipping or peeling) and is created by friction or impact or disturbed during repainting or remodeling projects. The other significant pathway of lead exposure is dust from bare lead-contaminated soil. Soil contamination can be traced to past widespread use of leaded gasoline, to deteriorating exterior paint (on houses, bridges, and industrial facilities), and in some areas to industrial sources of lead.

Other, usually less common, sources of lead in a child’s environment can include drinking water (where lead solder and sometimes lead pipes were used in the municipal water system, in the child’s home, or in both), imported ceramic tableware with lead glaze, old toys or furniture painted with lead-based paint, parents’ clothing (where a parent’s work or hobby involves high levels of lead), and even home remedies used by some ethnic groups. For any particular child with an elevated blood lead level, it may be difficult to determine whether the source of the exposure is lead-based paint, dust hazards, or some other source.

The Problem: Lead-Based Paint Hazards to Workers and Their Children

The Task Force notes that painters, maintenance and renovation workers, and abatement contractors who use unsafe paint removal practices (especially open flame burning and uncontrolled power sanding) can be exposed to extremely high levels of lead. These workers are at risk of dangerous blood lead levels, although adults are less susceptible than children to some of the damaging effects of lead. Workers who take home clothing contaminated by lead dust can also poison their own young children.

The Problem: Lead-Based Paint Hazards in Housing

More than one-half the entire U.S. housing stock — and more than three-quarters of units built before 1978, when the use of lead in residential paints was finally banned in the United States — are believed to contain *some* lead-based paint. The majority of this lead-based paint is not presently dangerous (or we would expect to see many more children with elevated blood lead levels). Title X moved beyond the mere presence of lead-based paint by redefining the problem as those conditions that can expose a child to hazardous levels of lead — the greatest risks being deteriorating paint and lead-contaminated dust and bare soil. The Task Force’s best estimate is that 5 million to 15 million housing units contain lead *hazards*. The Task Force believes that addressing lead hazards in these homes, and preventing new lead hazards in the balance of the housing stock, will substantially reduce the risk that young children will develop elevated blood lead levels.

Because approximately one in five American households includes at least one preschool child, relatively few of these hazardous units will house a child under the age of six at any given point in time. However, over a more extended period of time, a substantial portion of these hazardous units will house children under the age of six at some point as families move.

All lead-based paint is not created equal: lead-based paint used prior to 1950 is likely to contain much greater concentrations of lead than lead-based paint used between 1950 and 1978. The concentration of lead in paint can vary by more than 100-fold: from one-half of 1 percent to well over 50 percent.

Lead-based paint hazards are likely to be concentrated in:

- Housing that is in poor condition due to substantial deferred maintenance and has significant amounts of interior lead-based paint. These housing conditions and exposure to other sources of lead, such as lead in bare soil, are the most likely explanation for the much higher prevalence rates of elevated blood lead levels in urban, poor, minority children living in older neighborhoods.
- Housing maintained or renovated with unsafe work practices (for example, dry sanding of lead-based paint surfaces) in which specialized, lead-specific cleaning was not subsequently conducted to remove lead dust.

Otherwise well-maintained housing can become hazardous if presently non-hazardous lead-based paint deteriorates or is damaged, maintenance workers fail to take proper precautions when working on lead-based painted surfaces, or significant amounts of lead-contaminated dust are tracked or blown into the unit but not removed.

The Task Force emphasizes the distinction between the mere *presence* of lead-based paint versus the existence of lead-based paint *hazards*. It believes that scarce resources must first be made available to housing with lead-based paint hazards (for hazard control), then to housing with well-above-average risk of future lead-based paint hazards (for hazard prevention), and then to other housing containing lead-based paint.

The Problem: Lack of Standards for Hazard Control

In many jurisdictions, housing owners do not have clear guidance on what to do to control lead hazards. Some state laws and local housing codes address lead-

based paint hazards, but many of these codes prescribe actions that are inadequate, outdated (even dangerous), or so ambitious as to be unaffordable for most properties. The tort system develops its “standard of care” as cases are decided by judges and juries; at any given point, recent decisions will conflict and there is uncertainty as to what the *next* judge or jury will decide. Finally, any hazard control action carries with it the potential for *creating* hazards if the work is done improperly. Faced with these uncertainties, many owners choose to do nothing.

The Problem: Societal Costs of Childhood Lead Poisoning

As a society, the United States is already bearing high costs related to childhood lead poisoning. Some of these costs are relatively easy to measure: medical treatment, relocation to lead-safe housing of children having elevated blood lead levels, and special education. Other costs are real but more difficult to quantify: higher school failure rates; reduction in lifetime earning potential due to permanent loss of intelligence; and increases in societal pathologies (such as crime) due to reduced ability of lead-poisoned children to succeed as adults. Experts differ in their estimates, but it is clear that the societal costs per child poisoned are significant and the number of children poisoned is substantial.

The Task Force believes that implementation of its recommendations will lead to significant reduction in these societal costs. In that sense, the Task Force’s recommendations are self-financing. However, this self-financing is achieved only if the recommendations for public financing are accepted: the benefits of lead hazard control are society-wide, and it is appropriate for the public to invest in preventing the disease of childhood lead poisoning. We must resist the political temptation to foist these hazard control costs either onto children with elevated blood lead levels and their families or onto owners of economically distressed housing.

THE CURRENT SITUATION

The Current Situation: Deficiencies in Public Awareness

Some property owners simply are not getting the information they need to make informed decisions about maintaining lead-based paint, controlling lead-contaminated dust, and controlling other lead hazards. Many owners are unaware of the dangers presented by deteriorating lead-based paint, lead-contaminated dust, and bare lead-contaminated soil. All too often, maintenance, repainting, and renovation projects that disturb lead-based paint are performed without controlling, containing, and cleaning up lead dust. Similarly, some maintenance personnel and contractors are not as well informed as they need to be.

Many parents are unaware of lead hazards commonly found in the home and of the potential hazards of do-it-yourself projects that generate lead-contaminated dust. Parents do not know what steps they can take to protect their young children by minimizing lead exposure through regular housekeeping and having blood lead tests as part of well-baby care. For that matter, some health care providers may give parents bad advice because they are unaware of the most recent information on lead hazards.

Local officials and building inspectors are too often unfamiliar with the problems associated with lead-based paint. Even those familiar with the issues are often unable to take action because local laws, regulations, and statutes are unclear or prescribe inadequate, outdated, economically infeasible, or even dangerous remedies.

The Current Situation: Economically Distressed Housing

Many properties, both rental and owner-occupied, are not economically viable. The Task Force estimates that approximately one-fifth of the nation's housing is economically distressed. These units do not generate sufficient income to cover the costs of operation and maintenance, and tenants cannot afford rent increases to finance such costs. These owners have insufficient

resources to make improvements; private financing is not available because of the marginal economics of this housing; and government subsidies are limited or unavailable. Without additional resources, many owners of economically distressed properties cannot properly maintain their properties, let alone control lead-based paint hazards. Moreover, care must be taken so that the additional costs of lead hazard control do not result in marginal properties becoming economically distressed.

In general, for the vast majority of pre-1978 housing units that are economically viable:

- Benchmark standards will provide a framework for appropriate actions by owners;
- Liability and financing incentives will trigger appropriate hazard control action by housing owners;
- Private sector financing mechanisms can be relied upon to provide the resources to control hazards in this non-distressed housing; and
- Better education will create sufficient awareness of lead-based paint problems.

However, for economically distressed properties, reliance on education and private sector forces will not be sufficient. Economically distressed properties are particularly likely to contain lead-based paint hazards and are often occupied by young children. Without targeted public sector intervention, serious lead hazards in these units will go unattended, children will not be protected, and these units will undergo further disinvestment and possibly abandonment. The Task Force recognizes that, in addition to lead hazards, distressed housing units often face other serious problems that local officials must take into account in designing programs and allocating resources.

The Current Situation: Liability and Insurance Issues

The liability and insurance systems do not work effectively and efficiently to mitigate lead-based paint hazards. The liability system has two prime functions:

- Compensation to children who are injured due to the property owner's failure to meet the standard of care; and

- Risk management to create incentives for property owners to adhere to the standard of care and thereby avoid liability.

Whether viewed from the standpoint of children or from the standpoint of housing, the system is not working efficiently for lead poisoning claims. In particular:

- Standards of care are not well articulated, and therefore owners and insurers do not know what is expected and prudent.
- Risk is unpredictable, and, as a result, liability insurance is not readily available and is very expensive.
- The compensation system is random, providing large awards to a few and no awards or other relief to most children with elevated blood lead levels.

Without significant changes to the legal and insurance systems, the Task Force believes that these problems will continue.

The Current Situation: Who Performs Hazard Control Work?

Title X requires that lead-based paint inspections, risk assessments, and abatement projects be performed by certified individuals and firms. While nationally recognized training curricula have been developed for these disciplines and training courses are being offered through a national network of more than 30 universities and other private training providers, the supply of certified contractors is limited in most states. Many states are awaiting EPA regulations before establishing certification programs to ensure adequate training, proper work practices, and worker protection safeguards.

At the same time, millions of painters, remodeling contractors, and maintenance workers routinely encounter lead-based paint in the course of their regular activities. Unfortunately, most projects that disturb lead-based paint and generate significant amounts of lead dust are being performed without awareness of lead hazards. In fact, paint removal methods in common use today, such as open flame burning and uncontained power sanding, are now known to be unsafe when applied to lead-based paint.

The Task Force has concluded that it is unlikely, and inappropriate, for all lead hazard control work to be the province of a “specialty contracting industry,” as was the case with asbestos abatement. The Task Force recognizes the important role of certified risk assessors, lead-based paint inspectors, and abatement contractors. At the same time, however, the Task Force believes that maintenance staff can be trained to perform a great deal of the lead-based paint maintenance and hazard control work needed to protect children from lead exposure. It must be emphasized, though, that significant changes are needed in the paint removal and maintenance practices in common use today, particularly to control, contain, and clean up lead dust. The Task Force holds high expectations for and anticipates broad use of the one-day model training curriculum that EPA and HUD are developing for operations and maintenance/interim control activities.

THERE ARE NO SIMPLE SOLUTIONS

The various dimensions of the lead-based paint problem are interrelated. The Task Force has concluded that it is not productive nor effective to intervene in one part of the system and disregard others. Many issues are linked, for example:

- Without standards of hazard control, property owners do not know what measures they need to take to protect children from lead hazards.
- Standards that fail to target lead-based paint hazards or to achieve needed protections cost-effectively are counterproductive: if the standards for hazard control are unnecessarily costly, many owners will not be able to afford them.
- The lack of standards for hazard control discourages insurers from offering policies. If owners cannot get insurance, children with elevated blood lead levels are less likely to get compensation.
- Conversely, if the standards are not health-protective, children will be left at risk and insurers will be reluctant to provide insurance.

The Task Force therefore proposes standards of lead-based paint maintenance and hazard control that it believes protect children and are affordable to most housing owners. In addition, the Task Force recommends incorporating these standards into the liability, insurance, and financing systems to provide appropriate incentives for property owner compliance.

Because lead-based paint and lead-based paint hazards are pervasive in the nation's private housing stock, because the supply of qualified inspectors and risk assessors is currently limited in most states, and because hazard control requires a significant investment of private and public financial resources, efforts to control lead-based paint hazards will require sustained effort over several years. The Task Force believes that its recommendations, taken together, will dramatically reduce the incidence of elevated blood lead levels in young children living in private housing.

While the Task Force believes that its recommended standards of lead-based paint maintenance and hazard control are necessary to reduce lead hazards in rental housing, many marginal rental properties do not produce sufficient cash flow to pay for these measures. The Task Force has recommended that public subsidies be provided to finance hazard evaluation and control measures in these properties. If a state or local jurisdiction immediately requires that all of these measures be undertaken without providing subsidies or otherwise taking into account the economic capacity of properties and their owners to pay for such measures, the results may well be:

- Noncompliance (in other words, lead hazards in marginal properties will not be managed and children will continue to be endangered);
- Deterioration of properties as funds are diverted to lead hazard evaluation and control and from other, equally important operating and maintenance expenses;
- Abandonment of such properties by owners unwilling to make the further investment necessary to fund lead hazard management; or
- All of the above.

The importance of a public funding source for lead hazard evaluation and control in economically marginal properties cannot be overstated.

The Task Force Recommends Ten Guiding Principles

The Task Force recognizes that the nature of the lead problem differs from state to state and city to city, and that knowledge about the problem and the ability to identify and control lead hazards will advance in the future. The Task Force believes that there are a range of health-protective and cost-effective methods for implementing its recommendations. The Task Force, therefore, recommends the following principles to guide legislators, policymakers, housing owners, and others as they move to implement the Task Force recommendations:

- **Lead-based paint hazards are costly public health and housing problems.** Our society is bearing billions in annual, preventable costs with respect to children who develop elevated blood lead levels.
- **The answer to lead poisoning is prevention.** The alternative of intervening only after a child has been harmed is unacceptable and serves neither the interests of the child nor the property owner nor future generations of children.
- **Units with a high likelihood of lead-based paint hazards deserve priority attention.** The most serious lead-based paint hazards are concentrated in a relatively small share of our housing stock. State and local governments should identify those housing units where lead-based paint hazards are concentrated and should prioritize local hazard control efforts accordingly. Resources should be allocated commensurate with risk, with major emphasis placed on adequately assisting economically distressed properties.
- **A range of strategies and shared responsibilities is needed.** "One size fits all" approaches will not work. The housing stock and the people who live in it are extremely varied; and this variety calls for a range of solutions. Similarly, all relevant participants must work together to solve this society-wide problem.

- **All participants in preventing poisoning need more information and education.** A great deal of lead poisoning might be prevented by educating the full range of affected parties about lead hazards and their control.
- **Property owners need flexibility in selecting health-protective strategies.** Standards of hazard control must present a menu of potential approaches, allowing housing owners to choose among the various health-protective alternatives to find the one that is best suited to each property.
- **Market forces must be engaged as much as possible.** Market forces are a primary strength of America's economic and political systems, and the Task Force believes that, wherever possible, legislatures should incorporate incentives and disincentives to achieve the desired outcomes.
- **Public subsidies are vital to controlling hazards in economically distressed units.** Owners of a significant fraction of units with lead-based paint hazards cannot afford the full cost of hazard control. If a state or local government legally requires hazard controls without providing subsidies or otherwise taking account of the economic capacity of properties and their owners to pay for such measures, the results may well be noncompliance, deterioration of properties, abandonment, and continuing exposure of young children to dangerous lead-based paint hazards.
- **State and local programs should be tailored to meet local needs.** The nature and extent of lead-based paint hazards vary significantly from community to community. These differences should be reflected in tailored, health-protective, and cost-effective local solutions.
- **Prevention programs should build on community-based organizations and should help build their capacity to resolve residential environmental problems.** In many communities, community-based organizations have significant capabilities to develop, renovate, and operate affordable housing consistent with local and neighborhood needs. Other community-based organizations have capabilities that can be useful components of a com-

prehensive lead-based paint hazard control strategy. Such organizations can be trained to carry out environmental remediation activities, including lead-based paint maintenance and hazard control.

KEY TASK FORCE RECOMMENDATIONS

The Task Force identified a series of strategies that, taken together, form the basis for its recommended comprehensive approach to the lead-based paint problem (see Exhibit 1). The recommendations are addressed to many affected parties, in both the public and private sectors. These recommendations are included at the end of this Executive Summary. The great majority of the Task Force recommendations fall into six broad categories that *must* be pursued together in order to produce a health-protective and cost-effective solution:

- **Adopt benchmark lead-based paint maintenance and hazard control standards for rental housing.** State legislators and regulators should adopt the Task Force's benchmark standards of maintenance and hazard control for use in all relevant contexts: housing codes, housing code enforcement, health and sanitation codes, financing systems, the liability and insurance systems, and the public health system. The benchmark standards are designed to be reasonable, protective, specific, and enforceable. In designing these benchmark standards, the Task Force followed two key principles:
 - **Find health-protective solutions that are also cost-effective.** Throughout its discussions, the Task Force focused on achieving these two often competing goals.
 - **Consider both permanent and ongoing controls.** Permanent controls (abatement) offer greater assurance of safety than strategies such as paint stabilization, specialized cleaning, and Essential Maintenance Practices. Most housing providers believe that ongoing controls are more cost-effective on a net present

Exhibit 1

Reinforcing Strategies for Lead Hazard Control

All efforts to control lead-based paint hazards and protect young children from lead poisoning are related: Every piece—standards, incentives, resources, education, research, and sensible approaches for a variety of housing types—is important and connected.

WORKABLE AND PROTECTIVE STANDARDS FOR RENTAL HOUSING

Adopt Benchmark Standards of
Hazard Control

Implement the Standards and
Promote Compliance

APPROACHES FOR DIFFERENT HOUSING TYPES

Match Units with Households

Develop Actions Appropriate for
Tenant-based Assistance Programs
and Owner-Occupied Housing

RESOURCES AND INCENTIVES

Provide Public and
Private Financing

Modify the Liability and
Insurance Systems

EDUCATION AND RESEARCH

Increase Public Awareness

Promote Research on Cost-Effective
Hazard Evaluation and Control
Methods

value basis, but permanent controls will be more cost-effective in some situations, notably where a major renovation is planned. While permanent controls involve significantly greater initial cost, they do eliminate the need for ongoing hazard control activities. The Task Force encourages all affected parties to consider the full range of control strategies and the cost-effectiveness of each for a given property or unit.

- **Provide public financing of lead-based paint hazard control in economically distressed housing.** The worst lead-based paint hazards are concentrated in precisely the housing that cannot afford the cost of hazard control. Public financing is essential in this context. By contrast, in other contexts the Task Force relies on market mechanisms. The Task Force also points out that much of the economically distressed housing stock is a valuable affordable housing resource, and encourages local governments to consider carefully how best to preserve this housing, rather than risk losing it to disinvestment and abandonment.
- **Modify the liability and insurance systems.** The tort liability system currently functions poorly for lead poisoning claims. Changes in the system are required to ensure that it both compensates poisoned children and sends property owners clear signals about what preventive measures they should be taking to control lead-based paint hazards. State legislatures should adopt the Task Force's system of insurance and liability recommendations, including liability limitations for complying owners and an optional, no-fault alternative to the tort system for owners and occupants of housing in compliance with the standards of maintenance and hazard control.
- **Increase public awareness.** At the Task Force's public hearing, perhaps the most consistent message was that *everyone* needs more and better information regarding lead hazards: parents and homeowners, property owners and tenants, maintenance workers, painting and renovation contrac-

tors, medical professionals, educators, public health professionals, local code enforcement officials, appraisers, lenders, and insurers.

- **Follow matching strategies.** Because roughly only one household in five includes a child under age six, all children can be protected from lead-based paint hazards long before such hazards are controlled in the entire housing stock. To the extent allowable under fair housing laws, households with young children should be matched with housing units that do not contain lead-based paint hazards.
- **Promote more research on cost-effective strategies.** The human health effects of lead have been the subject of exhaustive research. By contrast, relatively little has been done to determine the most cost-effective strategies for evaluating and controlling lead hazards in housing. The Task Force calls for additional research into the geographic and housing distribution of children with elevated blood lead levels, studies to identify and validate more cost-effective and reliable methods for hazard evaluation and control, and technical studies relevant to hazard control strategies.

The Task Force's recommendations are consistent with President Clinton's new approach to addressing environmental problems, as set forth in his special report entitled *Reinventing Environmental Regulation* (March 16, 1995). For example, as called for by the report, the Task Force has recommended a combination of public and private efforts that are flexible, risk-based, and cost-effective and were developed through a collaboration process involving the affected parties.

SUMMARY OF THE BENCHMARK LEAD-BASED PAINT MAINTENANCE AND HAZARD CONTROL STANDARDS

The Task Force's benchmark standards of lead-based paint maintenance and hazard control have been designed to apply to all pre-1978 rental units (except housing for the elderly and zero-bedroom units, unless

such housing is occupied by a young child). Recognizing that lead hazards vary widely in pre-1978 housing, the Task Force recommends a two-tiered approach: certain maintenance and other responsibilities apply to all units, and additional hazard control standards apply to higher priority units.

Higher priority units are those presumed to pose a greater risk of lead hazards (absent unit specific data) such that additional hazard control measures are needed. For these benchmark standards, the Task Force classified units built before 1950 as higher priority, because information from several sources indicates that pre-1950 units are likely to contain more lead-based paint, paint with higher concentrations of lead, and a higher likelihood of hazards.

As state and local governments establish standards of hazard control, the Task Force recommends that they consider this pre-1950 benchmark for higher priority units as well as modifications based on objective local data, such as housing age and condition, lead poisoning prevalence rates, and demographic factors. The Task Force emphasizes the importance of this higher priority designation: an overly narrow definition will miss units with uncontrolled lead hazards, leaving children at risk; an overly broad definition will unnecessarily impose the requirements and expense of additional hazard controls on lower risk units. The designation of units as higher priority has direct economic consequences because of the cost of the additional hazard control standards. If public subsidies are not provided for economically marginal properties that are designated higher priority, scarce funds may be diverted from other maintenance work, or the failure to comply could encourage disinvestment or abandonment. State and local governments should make every effort to ensure that the higher priority designation is applied only to units with a high likelihood of having lead hazards.

The benchmark standards have been designed to provide appropriate alternatives for property owners in selecting the approach to meeting the standards that best fit their situations (see Exhibit 2).

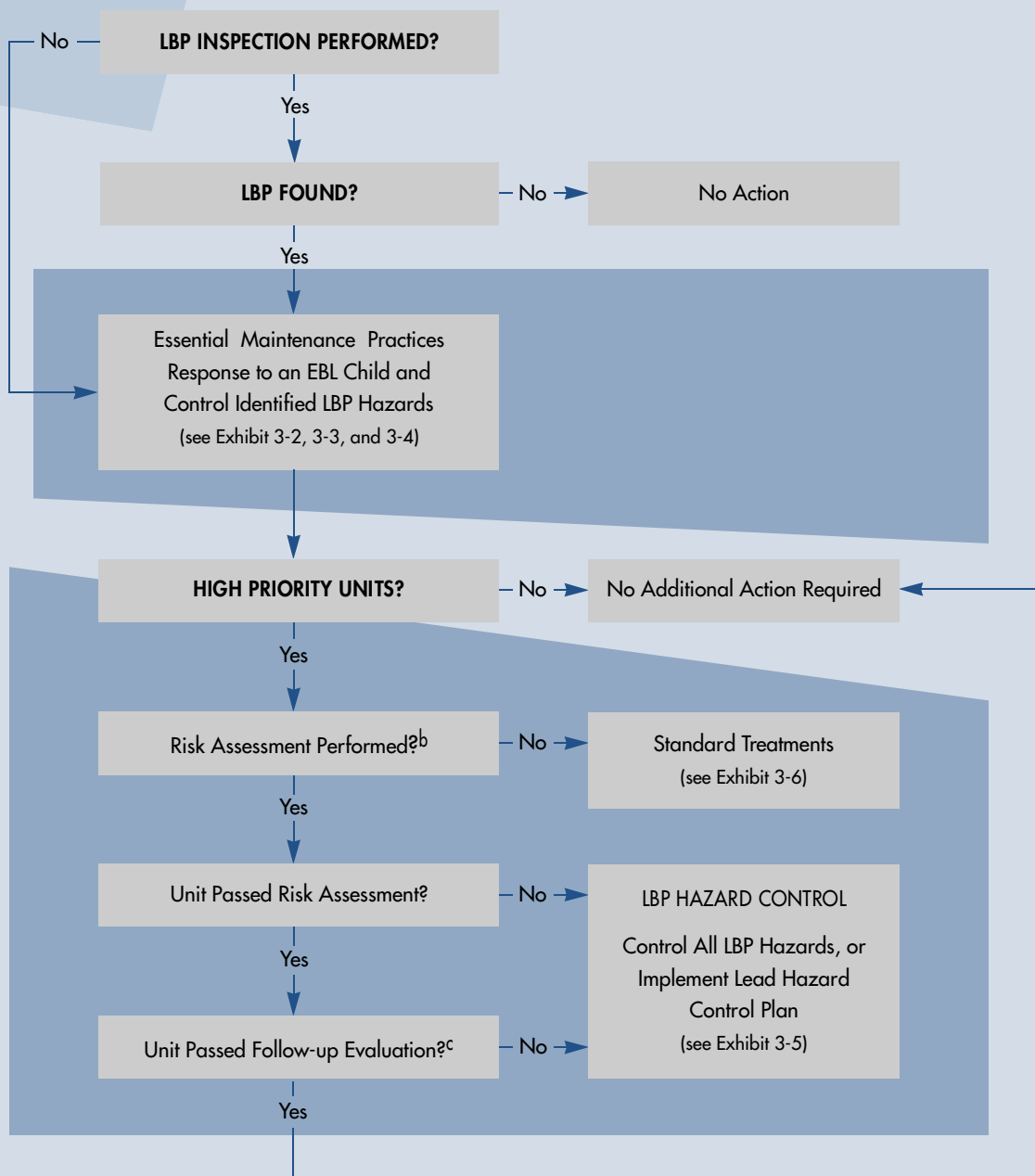
Performing a lead-based paint inspection is an option available to all property owners, although it is not mandated in any situation. An inspection may document that no lead-based paint is present or identify only a few components with lead-based paint for hazard control or abatement. If an inspection finds a unit or property to be free of lead-based paint (or to have had all lead-based paint abated), it is exempt from these standards completely.

The following core maintenance and hazard control standards apply to all pre-1978 rental units that may contain lead-based paint:

- **Essential Maintenance Practices.** These are low-cost maintenance and management actions to avoid creating lead-based paint hazards and to ensure rapid and safe responses to deteriorating paint (see Exhibit 3-2 for specific provisions).
 - **Response to an Elevated Blood Lead (EBL) Child.** When a young child develops a elevated blood lead level, additional action is called for by the property owner to identify and control any lead-based paint hazards in the unit (see Exhibit 3-3 for specific provisions).
 - **Control Identified Lead-Based Paint Hazards.** The housing owner must respond to lead-based paint hazards identified by a qualified professional or a local agency official and promptly control hazards in units occupied by a family with a young child (see Exhibit 3-4 for specific provisions).
- Higher priority units, as discussed above, are subject to additional hazard control standards.
- **Risk assessment.** This evaluation is performed by a certified professional to determine if any lead-based paint hazards are present. Having a risk assessment conducted is an option, rather than a general requirement, for owners of higher priority units. Further owner action will depend on the findings of the risk assessment:

Exhibit 2

How LBP Hazard Control Standards Apply to Pre-1978 Rental Housing Units^a



a Based on Title X, efficiency apartments and units for occupancy by elderly individuals or persons with disabilities are excluded, unless occupied by a child under age 6. Units that can document that no LBP is present or that all LBP has been abated are also excluded.

b Property owners can perform a full risk assessment or a lead hazard screen. However, properties that fail a lead hazard screen will need to have a full risk assessment conducted to identify the nature and location of LBP hazards in the unit.

c Units that pass two consecutive evaluations (risk assessments, lead hazard screens, or reevaluations) are no longer classified as higher priority units. However, these units still need to comply with the basic requirements that apply to pre-1978 units.

- **Risk assessment finds no lead-based paint hazards.** The owner would continue to follow the three standard practices described above, and would have a follow-up evaluation after an appropriate period of time. Units with two consecutive passes are no longer considered higher priority.
- **Risk assessment identifies hazards.** In this case, the owner would have the choice between controlling the hazards (a) in all units, or (b) in multifamily properties, working with the risk assessor to develop a property-specific Lead Hazard Control Plan that would be equally health-protective but more cost-effective (see Exhibit 3-5 for specific provisions).
- **Standard Treatments.** Alternatively, the owner can forgo a risk assessment or inspection and implement a standard set of hazard control measures, which are performed primarily at unit turnover (see Exhibit 3-6 for specific provisions).

The Task Force believes that by providing appropriate options to property owners, the benchmark standards will permit owners to arrive at health-protective and cost-effective strategies based on property-specific considerations, including:

- **Cost of hazard evaluation.** Clearly, funds expended for hazard evaluation are not available for hazard control. On the other hand, risk assessments and inspections can often target lead hazards for more cost-effective controls.
- **Absence of lead-based paint.** Owners of this housing will find it to their advantage to have this documented by a qualified professional, exempting the property from further hazard control requirements.
- **Absence of hazards.** The property might be found to contain lead-based paint but no lead hazards, thereby removing the property from the higher priority category.
- **Low-cost abatement.** The property might have very small amounts of lead-based paint that could be controlled permanently at very modest cost — lower than the cost of Standard Treatments.

To provide property owners and policymakers with a framework for understanding the costs associated with the benchmark standards, Chapter 3 presents preliminary estimates of the additional cost to comply with the standards for several sample properties. The actual cost for any given property will vary considerably depending on its construction, physical condition, geographic location, local market conditions and the treatment approach selected by the owner. The estimates illustrate the additional, or incremental, costs of meeting the benchmark standards over a ten-year period. They do not include the costs of correcting structural problems or housing code violations, nor the costs of routine maintenance that would otherwise be incurred by a property owner.

For lower priority units, the average incremental cost for property owners to comply with Essential Maintenance Practices is estimated to range from \$50 to \$100 per unit per year. For higher priority units, the annual average incremental cost of meeting the standards ranges from \$100 to \$200 per unit in large multifamily properties and from about \$250 to \$350 for single rental units, depending upon the treatment approach used. For higher priority units, costs in the first year are typically two to three times higher than annual average costs.

These estimates are based on specific assumptions about the extent of lead-based paint hazards, the number of repair projects, annual unit turnover rates, and other property characteristics. Of course, properties that contain extensive lead hazards are likely to incur much higher costs, while those that have fewer (or no) lead hazards would have lower costs. Further, properties located in higher cost areas may face greater expenses in meeting the standards due to the higher cost of labor, services, and materials. The specific assumptions used in developing these estimates are presented in Appendix B of the report.

WHO SHOULD READ THIS REPORT?

The Task Force is formally submitting this report to the Secretary of HUD and the EPA Administrator, per its statutory charge. However, because this report addresses the challenges of lead-based paint in private

housing, the intended audience is quite broad. The Task Force offers this report to public and private sector policymakers in the following fields and urges that they and their associated interest groups work to implement the recommendations in this document.

Appraisal

Building and Housing Codes

Children's Services

Economic Development

Environmental Justice

Homeownership

Housing Counseling

Housing Development

Housing Finance

Insurance Law

Lead Hazard Evaluation and Control

Pediatric Health Care

Public Health

Real Estate

Renovation and Remodeling

Scientific Research

State and Local Government

Worker Safety

STRUCTURE OF THE REPORT

It is clear from the foregoing summary that lead hazard evaluation and control is complex, with many aspects that must be dealt with under many varying conditions in varying housing markets. The Task Force's recommendations, therefore, cover a range of issues and actions. The Task Force urges that they be read and considered as a whole, and that policymakers refrain from considering either single recommendations or the contents of any single chapter outside of the broader context of the entire report.

Part I of the report provides introduction, background, and overview. Chapter 1 describes the nature and scope of the problem of childhood lead poisoning and the serious challenges that lead-based paint hazards pose to our housing stock. Chapter 2 sets forth the overarching principles and reinforcing strategies that guided the Task Force in developing its specific recommendations.

Part II of the report addresses standards of lead hazard control for rental housing and their implementation. Chapter 3 explains the importance and content of the benchmark standards of lead-based paint maintenance and hazard control proposed for consideration and adoption, with appropriate modifications to reflect relevant housing markets and conditions. Chapter 4 presents the Task Force's recommendations aimed at achieving broad scale implementation of the recommended benchmark standards, including the special consideration due economically distressed units.

Part III of the report deals with resources and incentives: financing, insurance, and liability. Chapter 5 covers both opportunities to enhance private financing and actions that should be taken to provide the critical additional resources necessary to control lead hazards in economically distressed housing. Chapter 6 deals with the complex issues of liability and insurance for rental property owners and contractors.

Part IV explores strategies for lead hazard control in different housing types. Chapter 7 contains proposals for matching households with young children or pregnant women with hazard-controlled units. Chapter 8 describes the potential immediate impact of implementing the benchmark standards in HUD- and other publicly-funded tenant-based assistance programs. Chapter 9 consolidates the Task Force discussion on owner-occupied housing.

Part V addresses meeting educational and research needs. Chapter 10 describes a series of measures that will greatly increase awareness of lead hazards and measures to reduce them. Chapter 11 delineates specific topics on which additional research is urgently needed.

PUTTING THE PIECES TOGETHER

Lead poisoning is a serious—but preventable—disease. In addition to the threat to children's health and intellectual development, lead-based paint hazards pose a threat to millions of housing units. The current system operates chaotically and does not serve the interests of children, housing providers, lenders, or insurers.

This report proposes a set of recommendations and reinforcing strategies that the Task Force believes are realistic, workable, and protective—changes that can work to the benefit of all parties. However, these changes will not occur unless all parties recognize their roles, responsibilities, and self-interest in overcoming the current confusion. Every day that we delay, more children will be harmed and the pressures on our affordable housing stock will intensify. Action is needed now on several fronts.

Federal Leadership

Federal leadership is essential to gain broad acceptance of the benchmark standards for maintenance and hazard control. Although these standards were designed for private housing, they are applicable to federal housing programs, present and future. In some cases, such as federally subsidized housing rehabilitation, federal programs should logically go beyond the benchmark standards; in no case should they do less. The breadth of federal housing assistance and insurance programs presents a unique opportunity to advance workable, protective, and cost-effective standards and to stimulate their adoption throughout private housing.

Without additional subsidies, hazards will go uncontrolled in distressed housing, children will continue to be poisoned, and these units may be lost. A dedicated source of funds is needed to help cities and states control lead hazards in economically distressed units. Finally, federal leadership is critical to research, education, model training courses, health-based standards, and quality controls on abatement and hazard evaluation.

State and Local Governments

State and local laws and regulations that are currently vague, outdated, unrealistic, or unprotective need to be reformed based on the benchmark standards, and modified as appropriate to meet local conditions. As states put clear, protective, and enforceable standards in place, they should provide incentives for compliance through insurance, financing, and liability limitations based on the principles and recommendations set forth in this report. State and local governments also

have important roles in education, blood lead screening and case management, enforcing standards, using matching strategies, and building capacity for safe and effective lead hazard control.

Private Sector Action

Private property owners can implement the Task Force's benchmark standards prior to changes in law and regulation. Such voluntary action will greatly reduce the risk of lead poisoning, evidence owners' good faith efforts, and assist in securing affordable liability insurance.

Both lenders and liability insurers should incorporate appropriate elements of the benchmark standards into their underwriting. Recognition of these standards by the real estate finance and insurance industries will provide powerful private market incentives for property owners to comply, help preserve our older stock of affordable housing, and expedite enactment of enlightened state laws and regulations. Community-based organizations in many neighborhoods can also play significant roles in identifying lead hazards and helping owners perform controls.

While some communities (and perhaps a few states) with a newer housing stock have very low rates of childhood lead poisoning, the extent of the problem is unknown in most areas. In jurisdictions in which children have not been systematically screened for lead poisoning and where housing units have not been evaluated for lead hazards, significant lead poisoning hazards may be undetected and untreated. The Task Force recommends the following initial steps for jurisdictions in which lead poisoning problems have not been characterized:

- Assessment of the nature and scope of the problem, based on housing data and blood lead levels;
- Prompt treatment of children with elevated blood lead levels and the elimination of sources of exposure; and
- Public education about lead hazards, including unsafe paint removal practices.

As jurisdictions compile more complete information on lead poisoning, the benchmark standards of hazard control and other Task Force recommendations can be tailored to meet local circumstances.

SUMMARY OF RECOMMENDATIONS

CHAPTER 3

Standards of Hazard Control

Recommendation 3-1:

Standards for Pre-1978 Rental Housing

The Task Force recommends that the following three LBP maintenance and hazard control standards apply to pre-1978 rental units (unless an LBP inspection has found no LBP):

- Essential Maintenance Practices (Exhibit 3-2);
- Actions in response to notification of an EBL child (Exhibit 3-3); and
- Control of identified LBP hazards (Exhibit 3-4).

Recommendation 3-2:

Defining Higher Priority Units

The Task Force recommends that pre-1950 housing be defined as the national benchmark for higher priority units and that state and local governments consider appropriate modifications based on factors including but not limited to age of the housing stock and location-based factors such as housing dilapidation or, where adequate blood lead screening data are available, above-average rates of EBL children.

Recommendation 3-3:

Establishing Additional Standards for Higher Priority Housing

The Task Force recommends that LBP hazard control standards for higher priority units require either:

- Risk assessment/hazard control
 - Control of identified LBP hazards (Exhibit 3-4); or
 - Implementation of a Lead Hazard Control Plan (Exhibit 3-5); or
- Standard Treatments (Exhibit 3-6).

CHAPTER 4

Implementation and Compliance

Recommendation 4-1:

Federal Actions Supporting Adoption of the Benchmark Standards

Federal agencies should recognize and support the adoption of the benchmark LBP hazard control standards for rental housing by taking the following actions:

- HUD, EPA, and other federal agencies should endorse the benchmark standards and urge that they be implemented by lenders, liability insurers, private organizations and trade associations, state legislatures, local jurisdictions, the courts, and property owners.
- HUD should apply these standards in its regulations for federally subsidized programs (with changes as appropriate) and require compliance with the standards for recipients of funding dedicated to provision of affordable housing, as well as to LBP hazard evaluation and control.
- HUD should sponsor a project by model code organizations to incorporate these standards into model housing and building codes.
- HUD/EPA should take all steps necessary to expedite completion of the operations and maintenance/interim controls one-day training curriculum.
- HUD/EPA regulations should prohibit the use of unsafe practices during activities that disturb paint on surfaces likely to contain LBP.
- HUD and EPA guidelines, regulations, and training courses for risk assessors and inspectors should address means to document the results of lead hazard evaluations and compliance with established standards.
- CDC should sustain and encourage universal blood lead screening to ensure identification, treatment, and LBP hazard control in the homes of at-risk children and to provide reliable data on the prevalence rates of EBL children for state and local governments to use in defining higher priority units.

Recommendation 4-2:

Revisions to Federal Real Estate Notification and Disclosure Regulations

HUD and EPA should consider changing real estate notification and disclosure requirements for rental housing to:

- Provide an opportunity in the disclosure process for property owners to indicate that LBP maintenance and hazard control measures are being followed; and
- Make clear that once a unit or property has been found not to contain LBP by a certified LBP inspector, the requirements for notification and disclosure, including delivery of the EPA pamphlet, no longer apply.

Recommendation 4-3:

Creation of Comprehensive Prevention Programs by State and Local Governments

State and local governments should create comprehensive lead poisoning prevention programs by:

- Incorporating LBP maintenance and hazard control standards into housing codes and health regulations;
- Establishing screening programs to identify EBL children, ensuring follow-up housing interventions, protecting families with EBL children from improper retaliation, and identifying priority areas for prevention efforts; and
- Seeking EPA approval of training and certification programs for risk assessors, inspectors, and abatement contractors.

Recommendation 4-4:

Recognition of LBP Hazard Control Standards by Private Sector Parties

Lenders, property liability insurers, and other private sector entities should support the adoption of the benchmark hazard control standards and integrate them into their operations.

- Liability insurers should recognize these standards and integrate them into their underwriting standards. Liability insurance should be provided at affordable rates to property owners who can pro-

vide independent verification of compliance.

- Both primary and secondary market financial institutions should use adherence to these standards as a factor in providing financing for the purchase and repair of rental housing.
- Both lenders and insurers should respect and reinforce the targeting and priorities embodied in the benchmark LBP maintenance and hazard control standards when establishing underwriting requirements.
- A broad range of public and private organizations should endorse these standards to accelerate their acceptance by state and local governments, property owners, insurers, and the courts. Examples include the American Society for Testing and Materials (ASTM), housing industry organizations, affordable housing groups and providers, legal organizations, bodies representing states and localities, public health and environmental groups, the lending industry, and the insurance industry.

Recommendation 4-5:

Adoption of LBP Hazard Control Standards by Property Owners

Owners of pre-1978 rental housing should voluntarily revise their operations and maintenance practices, as needed, to incorporate the benchmark LBP maintenance and hazard control standards.

Recommendation 4-6:

Taking Advantage of Opportunities for Abatement

The Task Force urges owners of pre-1978 units to take advantage of opportunities to undertake permanent abatement, such as during the course of substantial rehabilitation, renovation, and weatherization projects.

Recommendation 4-7:

Targeting Enforcement

The Task Force recommends that state and local governments target LBP enforcement efforts toward rental units with the highest risk of LBP hazards by:

- Treating the presence of extensive deteriorating paint in pre-1950 units as a top tier housing code violation (unless it is shown not to be LBP);
- Focusing enforcement activities on high-risk

rental units:

- Units in which the property owner has not responded to notification of deteriorating paint
- Other units in a multifamily building with an EBL child (and identified LBP hazards)
- Units in neighborhoods with a high number of EBL children
- Performing a visual examination for deteriorating paint whenever housing and building inspectors are inspecting a pre-1978 unit occupied by a family with a young child or a pregnant woman;
- Monitoring risk assessors, inspectors, and abatement contractors, as well as properties with Lead Hazard Control Plans for documentation of compliance.

Recommendation 4-8:

Enlisting the Help of Community-Based Organizations

The Task Force recommends that jurisdictions seek to enlist the help of community-based organizations, including community based contractors, in areas with concentrations of higher priority units in addressing lead hazards through developing education, risk assessment, and lead hazard control activities using staff, or volunteers who have received appropriate training.

Recommendation 4-9:

Making LBP-Related Services Available for Economically Distressed Housing

The Task Force recommends that public and private health and housing agencies and organizations expand lead poisoning prevention services to owners and occupants of economically distressed housing by establishing programs to:

- Assist in relocation of families with a young child to post-1978 or LBP hazard controlled units;
- Provide risk assessments to help owners target LBP hazard control efforts and develop Lead Hazard Control Plans; and
- Provide hazard control services (for example, specialized cleaning teams or window replacement as part of weatherization).

Recommendation 4-10:

Enforcing Standards in Economically Distressed Housing

The Task Force recommends that state and local government enforcement of LBP maintenance and hazard control requirements be conducted in a manner that takes into account the financial constraints faced by owners of economically distressed housing by:

- Using public subsidies in tandem with enforcement; and
- Extending compliance schedules for owners who can document need and are actively seeking financing and/or public subsidies.

CHAPTER 5

Public and Private Financing

Recommendation 5-1:

Including Hazard Evaluation and Control Under the Community Reinvestment Act

The Task Force recommends that bank examiners include loans, services, investments, and entrepreneurial activities related to LBP hazard evaluation and control when measuring lender performance in meeting community credit needs under the Community Reinvestment Act.

Recommendation 5-2:

Publicizing How LBP Activities Meet Community Needs

The Task Force recommends that federal bank regulatory agencies help promote activities and lending related to LBP hazard evaluation and control by providing examples and models for lenders of how such activities can help meet the credit needs of communities.

Recommendation 5-3:

Educating Appraisers

The Task Force recommends that initial and continuing training for appraisers include information about LBP hazards, the Title X required LBP notification and disclosure, and state and local hazard control requirements.

Recommendation 5-4:

Incorporating LBP Standards in Underwriting

The Task Force recommends that primary and secondary market lenders and the FHA loan insurance program modify their current practices for rental properties of three units or more built before 1978 to require:

- Investigation of LBP hazards prior to loan approval;
- Paint stabilization and appropriate cleanup within a specified time after loan closing;
- Property owner compliance with the Task Force recommended Essential Maintenance Practices and, for higher priority properties, compliance with either Standard Treatments or risk assessment/hazard control activities; and
- For small rental properties (3 to 40 units), annual visual checks of paint condition by owners and documentation to the seller/servicer of compliance with Essential Maintenance Practices and, if applicable, risk assessment/hazard control activities. For larger properties, confirmation by the seller/servicer of compliance during an annual property inspection.

Recommendation 5-5:

Limiting Lender Liability

The Task Force recommends that state legislatures statutorily exempt lenders acquiring property through foreclosure or deeds in lieu of foreclosure from liability for LBP-related injuries occurring during the first 8-12 months following acquisition of title to the property, as long as the lender:

- Originated the mortgage after the enactment of the legislation and in accordance with the underwriting standards proposed in Recommendation 5-4;
- Implements Essential Maintenance Practices within 90 days after acquiring title;
- Continues to follow Essential Maintenance Practices thereafter;
- Responds to occupant complaints regarding LBP hazard related code violations;

- Responds to notification of the presence of an EBL child in the same manner required of other owners; and
- Engages in diligent efforts to sell the property during the 8-12 months following acquisition.

Recommendation 5-6:

Encouraging Public/Private Financing

The Task Force recommends that HUD, Fannie Mae, and Freddie Mac take the lead in urging lenders to develop and implement public-private lending partnerships to finance lead hazard control as part of acquisition and rehabilitation financing. In order to encourage private financing, secondary public financing should be fully subordinated to the first mortgage and should not detract from the borrower's debt repayment capacity.

Recommendation 5-7:

Creating New State and Local Subsidy Programs

The Task Force recommends that state and local governments initiate subsidy programs to complement and enhance the federal resources and that, to the maximum extent possible, federal funds be supplemented by other resources, both public and private.

Recommendation 5-8:

Incorporating Poisoning Prevention in Existing and Proposed Consolidated HUD Block Grants

The Task Force recommends that continuing HUD programs and any consolidation of HUD funds into larger block grants condition assistance on adherence to the Task Force proposed benchmark standards of hazard control—and make lead hazard evaluation and control (including relocation to suitable units) an eligible activity.

Recommendation 5-9:

Using the Federal Tax Code to Finance Hazard Control

The Task Force recommends use of the federal tax system to encourage investment in LBP hazard control:

- Congress should create a federal income tax credit for LBP hazard evaluation and control activities for lower income, owner-occupied properties.

- The Internal Revenue Service should confirm that all activities related to keeping pre-1978 housing units free from LBP hazards be considered deductible expenses in rental housing, pursuant to relevant tax law.
- The income certification requirements of the Low Income Housing Tax Credit should be revised to make it easier to use tax credits for occupied rental properties. Owners should be allowed to presume that the percentage of low-income tenants in a building is the same as the percentage in the census tract. To qualify for this presumption and avoid initial income certification, the building must be located in a census tract where at least 70 percent or more of the households are below 50 percent of area median income and lead hazard control is being performed as part of the rehabilitation plan.

Recommendation 5-10:

Establishing a Federal Trust Fund

The Task Force recommends that the Federal Government implement and finance a trust fund to provide grants to help state and local governments clean up LBP hazards in owner-occupied and low-income rental housing. Funds should be generated through a dedicated source capable of providing substantial and sustained revenue.

CHAPTER 6

Liability and Insurance

Recommendation 6-1:

Requiring that Health Care Programs Cover Medical and Relocation Costs

The Task Force recommends that states mandate that Medicaid, other state health care programs, and regulated private health insurers cover medical and, where medically necessary, relocation expenses for children injured by LBP hazards.

Recommendation 6-2:

Creating a Last Resort Fund

The Task Force recommends that state legislatures create a special fund to compensate reasonable out-of-

pocket medical and relocation expenses of children poisoned by LBP hazards who cannot otherwise obtain such compensation.

Recommendation 6-3:

Providing for Prompt Injunctive Action for Noncompliance

The Task Force recommends that states establish an action for injunctive relief in units where owners are not in compliance with LBP hazard control requirements.

Recommendation 6-4:

Establishing Rebuttable Presumptions Where Owners Are Not in Compliance with Required Hazard Controls

The Task Force recommends that states statutorily clarify liability for owners subject to required LBP maintenance and hazard control requirements who have not implemented any required controls. Such presumptions would shift the burden of proof on specified issues, such as knowledge or causation, to owners.

Recommendation 6-5:

Limiting New Owner Liability

The Task Force recommends that state legislatures statutorily exempt a bona fide new purchaser of rental property from liability claims asserting LBP related injuries occurring during the first 90 days after acquiring the title to the property if by the end of the 90-day period the purchaser has implemented Essential Maintenance Practices and if during the 90-day period the purchaser complies with all other applicable LBP hazard control requirements.

Recommendation 6-6:

Establishing a Complete Liability Defense for Lead-Free Units

The Task Force recommends that state legislatures establish a complete defense to LBP liability for rental property owners who have non-fraudulently obtained a certificate of lead-free status from a licensed inspector.

Recommendation 6-7:

Limiting Liability for Units in Compliance with Health-Protective LBP Hazard Control Requirements

The Task Force recommends that states that establish an offer of remedial compensation or other alternate compensation systems limit liability for owners of rental properties with LBP who have implemented hazard controls that meet health-protective regulatory requirements, such as statutorily establishing a rebuttable presumption of due care.

Recommendation 6-8:

Creating State Compensation Systems

The Task Force recommends that state legislatures develop an offer of remedial compensation system, as outlined in Exhibit 6-1, to reduce tort litigation and provide limited remedial compensation for children injured in housing units that are in compliance with required LBP hazard controls.

Recommendation 6-9:

Remedial Compensation Insurance

The Task Force also recommends that state insurance regulators work with insurers and insurance service organizations to explore ways of providing owners with remedial compensation insurance either as part of coverage under third-party liability insurance policies or through the creation of new insurance riders or products.

Recommendation 6-10:

Increasing Availability of Insurance

The Task Force recommends that states that do not establish an offer of remedial compensation system for owners who document compliance with health-protective standards of LBP hazard control should adopt legislation designed to increase the availability of affordable insurance coverage against LBP claims for such owners and to reduce the amount of tort litigation.

Recommendation 6-11:

Establishing Certificate Systems

The Task Force recommends that states that grant liability relief to owners of properties in compliance with LBP maintenance and hazard control standards establish systems for the issuance of Certificates of Lead Hazard Status of specified duration.

Recommendation 6-12:

Clarifying Admissibility of Dust Testing

The Task Force recommends that states statutorily establish that only dust tests performed by a certified inspector or risk assessor be admissible in court actions.

Recommendation 6-13:

Encouraging Alternative Dispute Resolution

The Task Force recommends that states take steps to decrease the amount and cost of tort litigation over LBP claims by enacting legislation requiring courts to offer mediation or nonbinding arbitration to resolve such actions whenever possible.

Recommendation 6-14:

Improving Small Contractor and Community Group Participation in LBP Hazard Evaluation and Control Activities

Federal and state agencies should consider methods to increase the ability of small firms and community groups to obtain LBP hazard evaluation and control contracts including:

- Set asides;
- Waivers of bonding requirements for small or community-based contractors; and
- Grants to assist in startup, including liability insurance coverage.

CHAPTER 7

Matching Units with Households

Recommendation 7-1:

Training Counselors to Promote Matching

Key actors in the housing field, such as HUD, Fannie Mae, and Freddie Mac, should advance matching

strategies by developing and supporting initiatives to train counselors to help tenants and homebuyers understand the hazards of LBP and to assist them in locating suitable units.

Recommendation 7-2:

Relocating Children with EBLs using Federal Funds

The Task Force recommends that HUD make the relocation of EBL children an explicitly eligible activity under its housing programs and that state and local governments use their federal block grants and other available housing funds to provide relocation assistance to households with an EBL child.

Recommendation 7-3:

Preferences for Households That Need Suitable Units

The Task Force recommends that HUD establish criteria to ensure that public subsidies for lead hazard control be targeted to families with a young child or a pregnant woman, or that units that receive such subsidies be matched with families in need of suitable housing.

Recommendation 7-4:

Developing a Model Preference Policy

The Task Force recommends that HUD develop a model preference policy that accomplishes matching objectives and is consistent with fair housing laws.

Recommendation 7-5:

Developing Registries

The Task Force recommends that local housing or public health agencies develop and maintain registries of available post-1978 units and of pre-1978 units with valid documentation of compliance with standards of lead hazard control.

Recommendation 7-6:

Networking of Registries and Housing Providers

The Task Force recommends that, in designing and operating registries, state and local housing/health agencies establish working relationships with housing counselors, lenders, real estate agents, code enforcers, and other actors in the housing market to facilitate the two-way flow of information regarding the availability of units that meet minimum standards of lead safety.

CHAPTER 8

Tenant-Based Assistance (TBA) Programs

Recommendation 8-1:

Including the Recommended LBP Hazard Control Standards in TBA Standards for Physical Condition

The Task Force recommends that agencies that operate TBA programs incorporate standards for physical condition that parallel the LBP hazard control standards proposed by this Task Force, including requiring more stringent standards for higher priority units and sufficient dust testing to provide reasonable assurance that post-treatment cleaning has effectively removed any lead dust hazards.

Recommendation 8-2:

Requiring Owner Action When an EBL Child is Identified in an Assisted Unit

The Task Force recommends that, for TBA units occupied by an EBL child, administering agencies develop program standards that require a risk assessment, prompt correction of identified hazards, and a written notice to the tenant; alternatively, TBA programs could permit the owner to relocate the household to a comparable unit free of LBP hazards.

Recommendation 8-3:

Providing Preferences for Households on the Waiting List with an EBL Child

The Task Force recommends that agencies that operate tenant-based assistance programs revise their tenant selection procedures to provide a specific and high priority for any household on the waiting list that has a child with an EBL.

Recommendation 8-4:

Allowing Local Discretion Over Maximum Allowable Rents

The Task Force recommends that state and local housing agencies be permitted to increase the allowable rents for units free of LBP hazards in order to encourage hazard control and to increase the availability of hazard controlled units to tenants.

Recommendation 8-5:

Requiring Rental Property Owners Who Receive Federal Funds for Lead Hazard Control to Facilitate Occupancy by TBA Participants

The Task Force recommends that HUD require that private rental property owners receiving federally appropriated housing funds to control LBP hazards agree to accept TBA participants who otherwise meet the owner's criteria and to include the unit on registries assisting TBA households interested in locating safe units.

Recommendation 8-6:

Providing Streamlined Program Administration and Effective Training for Staff

The Task Force recommends that HUD and state and local housing agencies that administer TBA programs streamline their operations and provide education and training in the areas of enforcing standards for physical condition, TBA participant counseling, and rent reasonableness determinations.

CHAPTER 10

Education Strategies

Recommendation 10-1:

Capitalizing on the Real Estate Notification and Disclosure Process

The Task Force recommends that government agencies and private organizations develop and implement strategies to make optimal use of the educational opportunity presented by the real estate notification and disclosure process.

Recommendation 10-2:

Educating to Prevent Hazards From Renovation and Remodeling

The Task Force recommends that government agencies and the home improvement industry quickly develop an aggressive strategy to educate property owners and

managers, contractors, workers, and renters about lead hazards that may be created during renovation and remodeling activities in pre-1978 housing.

Recommendation 10-3:

Educating Consumers Through Retail Home Improvement Stores and Do-It-Yourself Magazines

The Task Force recommends that EPA, the Consumer Product Safety Commission, and other appropriate government agencies encourage the home improvement industry to inform consumers about the dangers of disturbing LBP during home renovation and remodeling projects. Retail home improvement stores should be encouraged to distribute EPA's guidelines and pamphlets on home renovation and remodeling, advisories on prohibited practices, and other materials to purchasers of sandpaper, power sanding tools, heat-guns, and related equipment and supplies. Publishers of do-it-yourself home repair magazines and books also should be encouraged to inform their readership about these dangers.

Recommendation 10-4:

Educating Parents and Rental Property Owners

The Task Force recommends that parents be educated about their rights, roles, and responsibilities to enable them to take all possible steps to protect their families' health and safety, and rental property owners and managers be educated so that they take responsible steps to control lead hazards.

Recommendation 10-5:

Creating Culturally and Linguistically Appropriate Materials

The Task Force recommends that education providers work with minority, low-income, and non-English speaking people to develop and disseminate culturally and linguistically appropriate multimedia materials to educate families, communities, and workers at risk of being lead-poisoned about LBP hazards and control methods.

Recommendation 10-6:

Promoting Interagency and Public-Private Collaboration

The Task Force recommends that federal, state, and local agencies, and private groups collaborate and coordinate their efforts to ensure that limited public resources effectively reach targeted audiences in a complementary manner.

Recommendation 10-7:

Making Comprehensive Information Easily Accessible in a Centralized Place

The Task Force recommends that state and local governments and nongovernmental groups continue and expand their efforts to make information on all aspects of lead poisoning, its prevention, and financing available in an accessible, centralized manner.

Recommendation 10-8:

Providing Housing Counseling and Information on Financing Options

The Task Force recommends aggressive efforts by lenders to increase public awareness of both LBP hazards and solutions and loan products that can be used to finance lead hazard control.

Recommendation 10-9:

Educating Health Care Providers

The Task Force recommends that health care providers be educated about childhood lead poisoning, its causes, methods of prevention and treatment, and the importance of routinely screening young children's blood lead levels. Health care providers also should be encouraged and trained to educate parents and families about childhood lead poisoning.

CHAPTER 11

Research Needs

Recommendation 11-1:

Increasing Research Initiatives

The Task Force recommends that the Federal Government intensify efforts to validate more cost-effective methods to evaluate and control LBP hazards in housing. Research efforts in the following areas should be initiated:

- Evaluation of inexpensive technologies for testing lead in paint and dust;
- Effectiveness of specialized cleaning methods for lead dust;
- The long-term efficacy of LBP hazard control, including abatement, interim controls, and Essential Maintenance Practices;
- Effectiveness of encapsulation and paint film stabilization;
- Utility of the standard HUD/EPA risk assessment and risk assessment screen protocols;
- Effective control of contaminated soil;
- Review of existing data on the relationship between lead dust and blood lead levels;
- National survey of the prevalence of lead-contaminated house dust;
- Rate of dust settling following abatement;
- Contribution of dust in carpets and upholstered furniture to childhood lead exposure;
- Contribution of dust from friction and impact surfaces to childhood lead exposure;
- Occupational exposure for workers in abatement and interim control; and
- A positive screen for high-risk units.

Recommendations	Audience																	
	Congress	HUD	EPA	Other Federal Agencies	State Leg. & Executives	State Ins. Commissioners	State Courts	State & Local Agencies	Rental Property Owners/Managers	PHAs	Real Estate Industry	Lending Industry	Liability Insurer Sureties	Health Insurers	Hazard Eval./Control Contractors	Home Improvement Industry	Community Based Organizations	Other
3-1: Establishing Basic Standards for Pre-1978 Rental Housing		■	■	■	■	■	■	■	■	■	■	■	■					
3-2: Defining Higher Priority Units		■	■	■	■	■	■	■	■	■	■	■	■					
3-3: Establishing Additional Standards for Higher Priority Housing		■	■	■	■	■	■	■	■	■	■	■	■					
4-1: Federal Actions Supporting Adoption of Benchmark LBP Hazard Control Standards		■	■	■														
4-2: Revisions to Federal Real Estate Notification and Disclosure Regulations		■	■	■				■	■									
4-3: The Creation of Comprehensive Prevention Programs by State and Local Governments			■		■			■										■
4-4: Recognition of LBP Hazard Control Standards by Private Sector Parties											■	■	■	■	■	■	■	
4-5: Adoption of LBP Hazard Control Standards by Property Owners									■									
4-6: Taking Advantage of Opportunities for Abatement									■									
4-7: Targeting Enforcement Efforts								■										

Recommendations

Audience

	Congress	HUD	EPA	Other Federal Agencies	State Leg. & Executives	State Ins. Commissioners	State Courts	State & Local Agencies	Rental Property Owners/Managers	PHAs	Real Estate Industry	Lending Industry	Liability Insurer Sureties	Health Insurers	Hazard Eval./Control Contractors	Home Improvement Industry	Community Based Organizations	Other
4-8: Enlisting the Help of Community-Based Organizations								■									■	
4-9: Making LBP-Related Services Available for Economically Distressed Housing		■	■	■				■						■			■	■
4-10: Enforcing Standards in Economically Distressed Housing								■		■								
5-1: Including Hazard Evaluation and Control Under the Community Reinvestment Act		■		■				■				■					■	
5-2: Publicizing How LBP Activities Help Meet Credit Needs of Communities		■		■				■				■						
5-3: Educating Appraisers		■		■				■				■						
5-4: Incorporating LBP Hazard Control Standards in Underwriting of Rental Housing		■		■				■				■						
5-5: Limiting Lender Liability					■		■											
5-6: Encouraging Public/Private Financing		■		■				■				■						
5-7: Creating New State and Local Subsidy Programs								■				■						

Recommendations

Audience

	Congress	HUD	EPA	Other Federal Agencies	State Leg. & Executives	State Ins. Commissioners	State Courts	State & Local Agencies	Rental Property Owners/Managers	PHAs	Real Estate Industry	Lending Industry	Liability Insurer Sureties	Health Insurers	Hazard Eval./Control Contractors	Home Improvement Industry	Community Based Organizations	Other
5-8: Incorporating Poisoning Prevention in Existing and Proposed Consolidated HUD Block Grants	■	■																
5-9: Using the Federal Tax Code to Finance Hazard Control	■	■																
5-10: Establishing a Federal Trust Fund	■																	
6-1: Requiring Health Care Programs to Cover Medical and Relocation Costs					■	■							■	■				
6-2: Creating a Last Resort Fund for Children Injured by LBP Hazards					■	■							■					
6-3: Providing for Prompt Injunctive Action for Tenants when Areas Are not in Compliance					■		■						■					
6-4: Establishing Rebuttable Presumptions Where Owners Are not in Compliance with Required Hazard Controls					■		■						■					
6-5: Limiting New Owner Liability for LBP Related Injury Claims					■		■						■					
6-6: Establishing a Complete Liability Defense for Lead-Free Units					■		■						■					
6-7: Limiting Liability for Units in Compliance with Applicable Requirements					■		■						■					

Recommendations

Audience

	Congress	HUD	EPA	Other Federal Agencies	State Leg. & Executives	State Ins. Commissioners	State Courts	State & Local Agencies	Rental Property Owners/Managers	PHAs	Real Estate Industry	Lending Industry	Liability Insurer Sureties	Health Insurers	Hazard Eval./Control Contractors	Home Improvement Industry	Community Based Organizations	Other
6-8: Creating State Compensation Systems					■		■						■					
6-9: Providing Owners with Remedial Compensation Insurance						■	■						■					
6-10: Increasing Availability of Insurance for Owners in Compliance with Standards						■	■						■					
6-11: Establishing Certificate Systems					■			■										
6-12: Clarifying the Admissibility of Dust Testing					■		■											
6-13: Encouraging Alternative Dispute Resolution					■			■										
6-14: Improving Small Contractor and Community Group Participation in LBP Hazard Evaluation and Control Activities																	■	
7-1: Training Counselors to Promote Matching		■						■			■	■					■	
7-2: Using Federal Funds to Relocate Children with EBLs		■						■										
7-3: Providing Preferences for Households That Need Suitable Units		■						■	■									

Recommendations	Audience																	
	Congress	HUD	EPA	Other Federal Agencies	State Leg. & Executives	State Ins. Commissioners	State Courts	State & Local Agencies	Rental Property Owners/Managers	PHAs	Real Estate Industry	Lending Industry	Liability Insurer Sureties	Health Insurers	Hazard Eval./Control Contractors	Home Improvement Industry	Community Based Organizations	Other
7-4: Developing a Model Preference Policy		■																
7-5: Developing Registries of Units in Compliance with Standards								■	■		■						■	
7-6: Networking of Registries and Housing Providers								■	■		■						■	
8-1: Including LBP Hazard Control Standards in TBA Standards for Physical Condition		■						■	■	■								
8-2: Requiring Owner Action for EBL Children in Assisted Units		■	■	■	■			■	■	■								
8-3: Providing Preferences for EBL Children on TBA Program Waiting Lists		■						■	■	■								
8-4: Allowing Local Discretion Over Maximum Allowable Rents		■						■	■	■								
8-5: Requiring Private Rental Property Owners Who Receive Federally-Subsidized Financing to Facilitate Occupancy by TBA Participants		■						■	■	■								
8-6: Streamlining Program Administration and Providing Training for Staff	■	■						■	■	■								
10-1: Making Use of the Educational Opportunities Presented by the Real Estate Notification and Disclosure Process		■	■	■				■			■	■						

Recommendations	Audience																	
	Congress	HUD	EPA	Other Federal Agencies	State Leg. & Executives	State Ins. Commissioners	State Courts	State & Local Agencies	Rental Property Owners/Managers	PHAs	Real Estate Industry	Lending Industry	Liability Insurer Sureties	Health Insurers	Hazard Eval./Control Contractors	Home Improvement Industry	Community Based Organizations	Other
10-2: Educating Owners to Prevent Hazards from Renovation and Remodeling								■	■	■	■	■	■	■	■	■	■	■
10-3: Educating Consumers Through Retail Home Improvement Stores and Do-It-Yourself Magazines								■	■	■	■	■	■	■	■	■	■	■
10-4: Educating Parents and Rental Property Owners		■	■	■				■			■	■				■		
10-5: Creating Culturally and Linguistically Appropriate Educational Materials								■	■	■	■	■	■	■	■	■	■	■
10-6: Promoting Interagency and Public/Private Collaboration		■	■	■				■			■	■				■		
10-7: Making Comprehensive Information Easily Accessible in a Centralized Place		■	■					■	■	■	■	■	■	■	■	■	■	■
10-8: Providing Housing Counseling and Information on Financing Options		■		■				■			■	■						
10-9: Educating Health Care Providers		■	■	■				■						■				■
11-1: Increasing LBP Research Initiatives	■	■	■	■														

Nature and Scope of the Problem of Childhood Lead Poisoning

Title X of the Housing and Community Development Act of 1992 significantly changed the national approach to evaluating and controlling lead-based paint hazards in residential housing to prevent childhood lead poisoning. Title X, also known as the Residential Lead-Based Paint Hazard Reduction Act of 1992, prescribes specific lead-based paint hazard evaluation and control activities for federally supported housing but does not impose requirements on purely privately owned housing (beyond the disclosure of lead-based paint hazards in real estate transfers and the use of certified hazard evaluation and abatement contractors). Congress directed the Secretary of the U.S. Department of Housing and Urban Development (HUD), in consultation with the Administrator of the U.S. Environmental Protection Agency (EPA), to establish the Task Force on Lead-Based Paint Hazard Reduction and Financing.

1.1 TASK FORCE MANDATE

The Task Force has a mandate to address sensitive issues related to lead hazards in private housing, including:

- Standards of hazard evaluation and control;
- Financing of hazard control activities; and
- Liability and insurance for rental property owners and hazard control contractors.

The Task Force's mandate concerning private housing also extends to tenant-based assistance programs. Housing in this category is privately owned and managed, but the owners receive payments from the government that supplement the rent of low-income tenants.

HUD Secretary Henry Cisneros appointed 39 individuals to this Task Force representing the wide spectrum of organizations and institutions involved with lead-based paint in housing. These organizations and institutions have diverse interests, constituencies, opinions, and experiences. The Task Force has investigated the public health problem of poisoning caused by lead-based paint hazards in private housing and has considered a variety of strategies for controlling these hazards. The resulting Task Force recommendations to HUD, EPA, Congress, state and local governments, property owners, lenders, and insurers are presented in Parts II through V of this report.

1.2 CHILDHOOD LEAD POISONING

Childhood lead poisoning is a serious, but preventable, disease. At high levels, lead poisoning can cause coma, convulsions, and death. At lower levels, observed adverse health effects in young children include reduced intelligence, reading and learning disabilities, impaired hearing, and slowed growth. Although lead ingestion is hazardous to all humans, children under six years of age and pregnant women (as surrogates for fetuses) are at highest risk because nervous systems are still developing until age six. As scientific evidence of lead's adverse human health effects has mounted, the generally recognized level for lead toxicity in younger children has been steadily reduced from over 60 micrograms per deciliter of whole blood ($\mu\text{g}/\text{dL}$) in the early 1960s to the current threshold of concern of 10 $\mu\text{g}/\text{dL}$, which the Centers for Disease Control and Prevention (CDC) established in October 1991. Medical treatments for lead poisoning are limited. Chelation therapy (a drug treatment aimed at drawing lead out of a child's body) is typically used only for children with very high blood levels

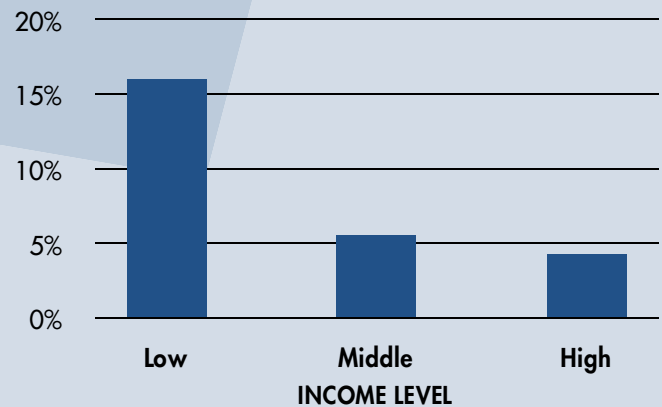
(for example, above 40 µg/dL). Chelation therapy is not without drawbacks, including costs, side effects, and frequently the need for retreatment. It is not a substitute for environmental remediation and is contraindicated for children who remain in lead-contaminated environments. The prescription for children with lower blood lead levels is to reduce their exposure to lead. The Task Force strongly believes that medical treatment is secondary to prevention. Children should never be used as lead detectors.

Despite dramatic reductions in blood lead levels in the United States over the past 15 years, lead poisoning continues to be the significant environmental health risk for young children. Results from the first phase of the third National Health and Nutrition Examination Survey (NHANES III) show that the mean blood lead level of the overall population dropped 78 percent, from 12.8 to 2.8 µg/dL, over the period between 1976 - 1980 (NHANES II) and 1988 - 1991 (NHANES III).¹ This decline is attributed to the restrictions on the use of lead in gasoline and the removal of lead from solder for food cans.² Other public policies have also limited the introduction of new sources of lead into the environment by restricting the use of lead in paints and in pipes and solder for drinking water systems. By contrast, relatively little has been done to reduce hazards from surfaces already painted with lead-based paint and from lead that has accumulated in dust and soil. Despite the general decline in blood lead levels, an estimated 1.7 million children (8.9 percent of U.S. children from ages one to five) have blood lead levels at or above 10 µg/dL.³

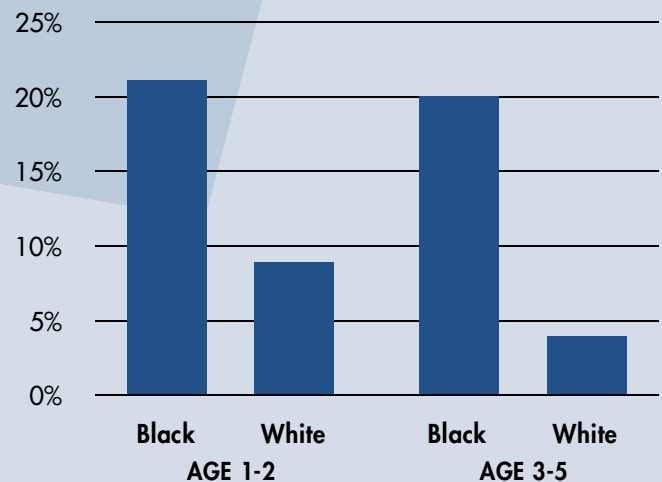
The problem of childhood lead poisoning is greatest for minority children in low-income central cities or urban suburbs. The problem of childhood lead poisoning is greatest for minority children in low-income central cities or urban suburbs. According to the NHANES III survey:

- Children aged one to five in lower income families are four times more likely than children in middle- or high-income families to have blood lead levels at or above 10 µg/dL;⁴

Children Aged 1 to 5 Years with EBLs by Income Level



Children with EBLs by Race and Age



- Twenty percent of African American children from ages one to five have blood lead levels at or above 10 µg/dL – almost four times the rate of White children; and
- Children living in central cities are three times more likely to have elevated blood lead levels than those outside of central cities. Populations with multiple risk factors have the highest prevalence rates: 37 percent of African American children living in central cities have blood lead levels at or above 10 µg/dL.

Although the number of children from ages one to five with blood lead levels at or above 10 µg/dL and at or above 20 µg/dL declined 90 and 96 percent, respectively, between the late 1970s and the early 1990s, lead-based paint and lead-contaminated dust and soil remain significant sources of childhood lead exposure for millions of children. Contrary to what was believed in the past, children do not have to eat paint chips to be poisoned. The primary pathway of childhood lead poisoning is the ingestion of lead-contaminated surface dust.

Lead-contaminated dust is formed as paint deteriorates or is disturbed by scraping, sanding, or burning. Lead-based paint on friction and impact surfaces, such as doors and windows, can also generate lead dust. Lead-contaminated dust enters children's bodies through normal hand-to-mouth activity, such as when children put their hands, toys, or other objects in their mouths. Lead-contaminated bare soil can also poison children by being ingested, inhaled, or tracked indoors to contaminate interior dust. In addition, a small percentage of children are poisoned by eating lead-based paint chips or chewing protruding surfaces painted with lead-based paint. Eating lead-based paint chips can result in severe poisoning. Other sources of childhood lead exposure include lead in soil on playgrounds, in drinking water, emitted from municipal incinerators and smelters, and taken home from a parent's workplace. While the elevated blood lead levels of many children do result from residential lead-based paint hazards, it is always possible that in an individual child's case the lead came from another source.

1.3 LEAD-BASED PAINT HAZARDS IN HOUSING

According to estimates by HUD, approximately 57 million pre-1978 housing units contain some lead-based paint – over half of the nation's entire housing stock. In general, the older the housing, the greater the amount of lead-based paint. Lead-based paint is found more often on exteriors than interiors, and more fre-

quently on trim than walls and ceilings. Older units also tend to contain paint with higher concentrations of lead (up to 50 percent by dry weight), as well as more coats of paint. Complete removal of lead-based paint from all U.S. housing units would be a huge undertaking and would require an expenditure of several hundred billion dollars – a level of investment that vastly exceeds available resources. Therefore, the Task Force has focused its attention on strategies that can be implemented on a broad scale to protect children from lead-based paint hazards in the near term.

Title X redirected the national approach to lead-based paint by focusing attention on lead-based paint hazards – physical conditions that can result in human exposure to unsafe levels of lead. Estimates of the number of units that currently contain lead-based paint hazards can be developed from several sources to gain an understanding of the scope of the problem.

- In 1990, HUD estimated that 13.8 million housing units contained chipping and peeling lead-based paint, based on the results of its detailed evaluation of a sample of private U.S. housing units.⁵ The study also estimated that an additional 6.2 million housing units had elevated lead dust levels, although this estimate of units with lead dust hazards is less reliable.⁶ Of the 20 million units projected by HUD to contain lead-based paint hazards, 3.8 million were estimated to house a child under age seven.

Lead-Based Paint Hazards in Housing

- Approximately 57 million pre-1978 housing units contain some lead-based paint.
- An estimated 13.8 million housing units contain deteriorating lead-based paint.
- Roughly 6 million pre-1979 housing units are reported to be in poor physical condition.
- Approximately 400,000 pre-1979 housing units are economically distressed, in poor physical condition, and occupied by a child under age 6.

- Data from the 1991 American Housing Survey (AHS) on the physical and economic condition of housing units can also be used to estimate the extent of lead-based paint hazards.⁷ Approximately 6.2 million pre-1979 units were reported by occupants to be in poor physical condition, which includes units with broken plaster, peeling paint, and holes in interior walls.⁸ On a different scale, as many as 17 million pre-1979 units are estimated to be economically distressed, a factor associated with deferred maintenance and therefore linked to the presence of lead-based paint hazards.⁹ Approximately 400,000 of these units that are in poor physical condition are occupied by a child under age six, and lack the resources to address hazardous conditions due to economic distress.

All of these data indicate that the problem of lead-based paint hazards in U.S. housing is extensive. The Task Force estimates that, in all likelihood, somewhere between 5 million and 15 million housing units contain lead-based paint hazards. At any given time, a fraction of these units are occupied by families with a young child or a pregnant woman, as only 18 percent of American families have a child under age six. However, because families with young children – particularly those in rental housing – tend to move frequently, far more units will be occupied by children under age six than shown by point-in-time estimates of these units.¹⁰ Therefore, the number of units that need to be made safe from lead-based paint hazards rests somewhere between the estimates of units with lead-based paint hazards that are occupied by young children and the total number of units that contain lead-based paint hazards.

The Task Force also wants to emphasize that while tens of millions of units contain lead-based paint that does not present an immediate hazard to human health, lead-based paint can deteriorate over time or create an immediate hazard if not controlled when it is disturbed. Therefore, the Task Force's recommendations include recommendations for maintenance prac-

"[T]o achieve additional reductions in blood lead levels in the US population, sources other than lead in gasoline and lead in solder need to be addressed further. The major remaining sources are lead in paint and lead that has already accumulated in dust and soil. Without efforts to reduce these exposures, population blood lead levels are unlikely to continue to decline."

Pirkle, J.L., et al., *Journal of the American Medical Association*, July 27, 1994, pp. 290-291.

tices as well as lead-based paint hazard control measures to protect children from lead-based paint hazards in their homes.

1.4 BENEFITS OF PREVENTING POISONING

Childhood lead poisoning is both a personal tragedy and a costly public health problem. Preventing exposure to lead hazards will greatly benefit both individual children and families, as well as the nation as a whole. Benefits that can be quantified in monetary terms include reductions in medical and special education costs and improvements in productivity and earning power. Other benefits, such as lowering infant mortality, improving children's stature, increasing their quality of life, and avoiding family emotional costs associated with caring for poisoned children, are extremely difficult to quantify even in nonmonetary terms. The importance of these benefits, however, is self-evident, especially when summed over millions of children.

The monetary benefits of reduced medical and special education costs and improved productivity have been quantified in terms of the estimated cost per child affected by elevated blood lead levels.¹¹ These estimated costs per child (updated to 1994 dollars) are discussed below. The national aggregate annual benefits of avoiding such costs are also estimated below, based on the most recent NHANES III data on the number of children with elevated blood lead levels.

To calculate the annual benefit of preventing

childhood lead poisoning, the NHANES III data on the total number of children with elevated blood lead levels were used to estimate the number of children who develop elevated blood lead levels each year. The NHANES III data indicate that:

- 11.5 percent of children of ages one and two have blood lead levels at or above 10 µg/dL, while only 7.3 percent of children of ages three through five have blood lead levels this high; and
- 0.6 percent of children of ages one and two have blood lead levels at or above 25 µg/dL, while only 0.4 percent of children of ages three through five have blood lead levels this high.

These data show that children are most likely to develop lead poisoning at the age of one or two. This finding suggests that a large proportion of children older than two with elevated blood lead levels may have had even higher levels at ages one and two. It is also reasonable to extrapolate that a large proportion of children with elevated blood lead levels at age two may have also had elevated blood lead levels at age one. Therefore, a lower bound estimate of the number of children who develop elevated blood lead levels each year can be based on NHANES III data on the number of one-year-old children with elevated blood levels. The total population of one-year-old children in 1990 was 3.9 million.¹² If 11.5 percent of these children have blood lead levels at or above 10 µg/dL, then approximately 450,000 one-year-old children become poisoned above 10 µg/dL each year. Similarly, if 0.6 percent of one-year-olds have blood lead levels at or above 25 µg/dL, then approximately 24,000 one-year-old children become poisoned above 25 µg/dL each year. These estimates are lower bounds because some children will develop elevated blood lead levels after the age of one, and because the 1990 Census undercounted urban minority populations.

There are numerous benefits to preventing childhood lead poisoning. Some of the major benefits include:

Lower Medical Costs. Children with high blood

lead level concentrations need medical attention, including physician visits, laboratory testing, chelation therapy, neuropsychological testing, and follow-up testing. Such a process involves considerable medical and administrative costs. Reducing blood lead level concentrations will decrease the number of children requiring medical care and the required extent of care. For example, preventing a child's blood lead level from rising to 25 µg/dL or higher would reduce medical costs by about \$1,800 (1994 dollars) per child, on average.¹³ Thus, preventing all children from having blood lead levels at or above 25 µg/dL would save over \$43 million per year, assuming that 24,000 children now become poisoned at or above 25 µg/dL per year and receive medical care. Additional health care savings would result from further blood lead level reductions for these children and the many more children with lower elevated blood lead levels.

Decreased Special Education Costs. Children with high blood lead levels are more likely than other children to suffer decreased school performance and require reading or speech therapy or psychological assistance. If it is assumed that 20 percent of children with blood lead levels at or above 25 µg/dL require special education, then preventing a child's blood lead level from rising above 24 µg/dL saves, on average, approximately \$4,000 (1994 dollars) in special education costs.¹⁴ Thus, preventing childhood blood lead levels from rising above 24 µg/dL would save roughly \$96 million per year, assuming that 24,000 children per year become poisoned above 24 µg/dL.

Improved Productivity. While most children poisoned by lead-based paint hazards do not require special education or other assistance, their future economic productivity may decline due to impaired cognitive functions and reduced intelligence. In addition to lost productivity, there is a loss in quality of life for individuals who suffer IQ reductions due to lead poisoning. Lead poisoning also negatively affects wages and lifetime earnings through reduced educational attainment and by other effects, such as decreased attention span. Preventing an increase of one µg/dL in a child's blood lead level saves \$1,350 (1994 dollars) per child in increased future income.¹⁵

Thus, for each one µg/dL reduction in blood lead levels for all 450,000 children who develop blood lead levels above nine µg/dL each year, hazard control efforts could increase their expected lifetime earnings by roughly \$600 million per year.

Other Benefits. Preventing poisoning has other potential benefits, including:¹⁶

- Preventing prenatal exposure to lead and reducing the incidence of associated miscarriages, low birth weights, short gestational age, and impaired cognitive functioning;
- Avoiding the parental and family time, expenses, and emotional costs involved in caring for poisoned children;
- Improving children's stature, hearing, vitamin D metabolism, and blood production;
- Reducing juvenile delinquency and the burden on the educational system;
- Reducing personal injury claims and court cases; and
- Improving the health of the adult population, such as by preventing strokes, myocardial infarctions, and death.

In addition to the health benefits provided by reducing lead-based paint hazards, there are also benefits to the housing stock. As detailed later in this chapter, confusion over standards of care related to lead-based paint in rental housing is now threatening the viability of millions of affordable units. In most states, the tort system is not working efficiently on lead poisoning. Liability insurers are increasingly refusing to provide coverage for lead poisoning. Property owners are concerned about "going bare" without insurance, and lenders are increasingly anxious about financing the purchase or renovation of older housing. In addition to protecting children from poisoning, implementation of practical and protective standards of hazard control can prevent disinvestment – and even abandonment – of millions of older affordable housing units, a resource this nation cannot afford to lose.

1.5 TITLE X FRAMEWORK AND REQUIREMENTS

FOR PRIVATE HOUSING

Title X, the Residential Lead-Based Paint Hazard Reduction Act of 1992, is the latest national legislative response to the problem of lead poisoning. This law has refocused national attention and resources on reducing these hazards *before* a child is poisoned, rather than relying on poisoned children as the trigger for action. Because three-fourths of units built before 1978 contain some lead-based paint, Title X made two fundamental policy changes to make the national approach to lead-based paint in housing more workable.

- Title X focused on lead-based paint *hazards*, not on the mere presence of lead-based paint; and
- Title X addresses the problem through combination of short-term strategies (interim controls or in-place management) and long-term hazard abatement.

Title X assigns specific responsibilities and deadlines to EPA, HUD, and the Occupational Safety and

Federal Agency Responsibilities Under Title X

- Developing a hazard evaluation and control infrastructure
- Increasing awareness of lead-based paint hazards and controls
- Financing hazard evaluation and control
- Specifying lead-based paint hazard evaluation and control requirements in housing

Health Administration (OSHA) to help reduce lead-based paint hazards in private housing. These responsibilities and the role of state and local governments are described below. Title X also imposes specific lead-based paint requirements in federally supported housing, that is, federally owned units and units receiving federal project-based subsidies, as well as other work funded by HUD and pre-1978 units sold by the

Farmers Home Administration, the Veterans Administration, and other federal agencies.

This section briefly describes the key responsibilities of federal agencies and state and local governments under Title X. State and local governments have a critical role to play in controlling lead-based paint hazards in private housing. They will have the primary responsibility for implementing Title X programs. Consequently, many of the Task Force recommendations discussed in the following chapters are ultimately directed to state and local governments.

Developing a Hazard Evaluation and Control Infrastructure

During the 1980s, no established standards for hazard evaluation and control existed. The conditions under which lead-based paint constituted a hazard had not been established, nor had dangerous levels of lead dust. Further, untrained workers sometimes used improper or uncontrolled hazard control techniques that aggravated lead-based paint hazards. In many instances, workers were not properly protected and measures were not taken to control, contain, and clean up lead-contaminated dust. Title X addresses these concerns by requiring EPA, HUD, and OSHA to promulgate regulations that will help develop a hazard evaluation and control infrastructure.

Work Practice Standards and HUD Guidelines.

Under the Toxic Substances Control Act (TSCA), as amended by Title X, EPA is developing regulations governing lead-based paint hazard evaluation and abatement activities in private and public housing, public and commercial buildings, and steel structures.¹⁷ These rules will include standards for conducting lead-based paint activities that take into account reliability, effectiveness, and safety. In addition, to reduce risks from renovation and remodeling activities that disturb lead-based paint, EPA has developed lead-based paint guidelines for these activities in pre-1978 housing.¹⁸ Title X also requires HUD to establish new guidelines for lead-based paint hazard evaluation and control activities in all federally supported projects.¹⁹ These guidelines provide detailed, technical information on the best practices for identifying lead-based

paint hazards and controlling such hazards safely and effectively in different types of housing. While developed for federally-supported housing, these guidelines will help increase the quality, uniformity, and reliability of lead-based paint hazard evaluation and control services available to private property owners.

Training and Certification Requirements. EPA is promulgating regulations under Title X to ensure that individuals performing lead-based paint inspections, risk assessments, and abatements are properly trained and that contractors engaged in such activities are certified. In addition, training providers must be accredited and must meet minimum standards for:

- Training curriculum and hours;
- Hands-on training;
- Trainee competency and proficiency; and
- Training program quality control.

These training, certification, and accreditation programs will help to establish a large and well-trained workforce that can identify lead-based paint and effectively, reliably, and safely control lead-based paint hazards. EPA is also investigating the need to establish training and certification requirements for persons engaged in renovation and remodeling activities that research studies find to be hazardous.

Title X anticipates that states will develop their own training, certification, and accreditation programs, which must be approved by the EPA and at least as protective as federal standards. State programs can, however, be more stringent than these standards. EPA will implement the requirements in states that do not establish their own programs.

EPA is also developing training course curricula for risk assessors, inspectors, supervisors of abatement projects, abatement workers, and interim control and operations and maintenance workers. In addition, EPA is now funding a network of Regional Lead Training Centers to provide training services to contractors, housing officials, public regulators, and other interested parties.

Identification of Dangerous Levels of Lead. EPA is analyzing recent research studies in order to promul-

gate regulatory standards for lead hazards in dust, soil, and paint. In the interim, EPA has published guidance, based on the best data available, that establishes advisory levels for lead-contaminated dust and lead-contaminated soil.²⁰ This guidance will assist property owners, the lead-based paint hazard evaluation and control industry, and public agencies in determining when lead-based paint hazard control measures should be taken as well as the success of such measures.

Laboratory Accreditation Standards. EPA has established the National Lead Laboratory Accreditation Program and has developed protocols, criteria, and performance standards for laboratories that analyze paint chips, dust, and soil samples for lead.²¹ This program is being implemented through a private sector accreditation program and is designed to ensure that reliable laboratory services are available to support lead-based paint hazard detection and control activities.

Worker Protection Standards. Under Title X, OSHA has promulgated interim final employee protection requirements for construction workers exposed to lead.²² If airborne lead concentrations exceed a set level, employers must initiate compliance activities, such as periodic blood testing, medical surveillance, training, and education. These regulations require exposure assessment or objective data analysis, hazard communication training, medical removal protection, and good housekeeping measures. Where air lead levels are expected to exceed 30 µg/m³, preemployment medical examinations and additional training are required. Where air lead levels are expected to exceed 50 µg/m³, respiratory devices, protective clothing, medical surveillance, and medical removal protection are required. These rules apply to workers involved in lead-based paint hazard evaluation and control activities as well as remodeling and renovation activities that may disturb lead-based paint in both private and public housing.

Increasing Awareness of Lead-Based Paint Hazards and Controls

Creating public awareness of lead-based paint hazards and controls is essential in preventing childhood lead poisoning. Under Title X, a number of educational activities are currently under way at the federal level, including activities of the National Lead Information

Center's hotline and clearinghouse,²³ publications and pamphlets, and grant programs. Educational activities and responsibilities under Title X, as well as educational opportunities relating to lead-based paint in private housing, are discussed further in Chapter 10 of this report.

Lead Hazard Information Pamphlet. Under Title X, EPA is responsible for developing a lead hazard information pamphlet, entitled "Protect Your Family from Lead in Your Home." The pamphlet describes the general hazards of lead-based paint, provides tips on lead poisoning prevention, discusses ways to eliminate lead-based paint hazards, and notifies people of their rights to information when buying or renting housing built before 1978. The pamphlet will be distributed before individuals purchase, rent, or renovate most pre-1978 units.

Real Estate Notification and Disclosure. Pursuant to proposed joint EPA and HUD regulations, before purchase or rental of private pre-1978 housing, the seller or lessor must:²⁴

- Give the prospective buyer or renter the EPA lead hazard information pamphlet; and
- Disclose to the buyer or renter the presence of any known lead-based paint or lead-based paint hazards in the property and provide any lead hazard evaluation report available to the seller or lessor.

Furthermore, prospective buyers are given up to ten days to conduct a risk assessment or inspection. Real estate notification and disclosure are expected to be effective in 1996 and should increase the information available to the public on the hazards of lead-based paint, both in general and in the specific housing units they occupy. There are *no requirements* for risk assessments, inspections, or lead hazard control in private housing.

Renovation and Remodeling Notification Rules. Housing renovation and remodeling activities that disturb lead-based paint can create risks of lead exposure to both workers and occupants. EPA has proposed rules requiring renovation contractors to give lead hazard information pamphlets to property owners prior to commencing renovation projects that disturb lead-

based paint in pre-1978 housing.²⁵ A final rule is expected by summer 1995.

Disclosure Requirements in Federally Supported Housing. Under Section 1012 of Title X, all purchasers and tenants of pre-1978 federally assisted housing must be given EPA's lead hazard information pamphlet. Furthermore, occupants must be notified of the results of all risk assessments, inspections, or lead-based paint hazard control activities conducted.

State and Local Government Programs. State and local governments have a significant role to play in lead education. Being closer to local housing and health concerns, they are well positioned to conduct educational activities. They can narrowly target important audiences and carefully address the specific educational needs of the communities they serve. State and local governments are currently undertaking educational activities on lead-based paint. These innovative activities include assessing the knowledge base of communities to determine the kind of education needed; developing pamphlets on lead, distributing fliers in high-priority neighborhoods, giving presentations in community centers, and educating public health staff.

Financing Hazard Evaluation and Control

Lead-based paint hazard evaluation and control work can be expensive, and many homeowners will be unable to afford it without financing. Owners of economically distressed housing are, by definition, unable to control most lead-based paint hazards without financial assistance.

HUD Abatement Grants. HUD's Office of Lead-Based Paint Abatement and Poisoning Prevention operates a competitive grants program for state and local governments. Recipients use the funds for lead hazard evaluation and control activities, family relocation during hazard controls, worker blood lead level monitoring, post-control clearance testing, and public education. Fifty-six cities, states, and counties have received grants up to \$6 million each. In early 1995, HUD proposed that this program be consolidated into a new affordable housing grant program.

State and Local Financial Assistance Programs. A few state and local governments across the country are

currently testing or operating programs that provide financing for lead-based paint hazard control. Some programs are funded through federal grants, others through dedicated state and local funding sources. These programs use a variety of financial incentives including low-interest loans, deferred loans, grants, and tax credits.

Specifying Lead-Based Paint Hazard Evaluation and Control Requirements in Housing

Title X requires certain lead-based paint hazard evaluation and control activities to be undertaken in federally supported housing. There are, however, no similar requirements for private housing.

Requirements for Federally Supported Housing. Title X requirements address four categories of federally supported housing units: public housing units, units owned by the Federal Government as a result of defaulted loans or other federally owned property that is being sold to a private owner, properties receiving project-based federal assistance, and privately owned units that receive federal funds for rehabilitation and remodeling. Under Title X and existing federal lead-based paint requirements:

- Public housing units must be inspected, and all lead-based paint must be abated during modernization projects or if a child with an EBL occupies the unit.
- Federally owned units built before 1960 must be inspected for lead-based paint and abated before sale. In the case of units built between 1960 and 1978, lead-based paint inspections are called for with the results to be provided to potential buyers. Title X made these requirements pertaining to federally owned housing subject to the appropriation of funds. Since no funds have been appropriated, these requirements are not presently in effect.
- Properties receiving ongoing project-based federal assistance must undergo risk assessments and interim control measures, beginning with pre-1960 units.
- Federally funded rehabilitation projects receiving more than \$5,000 must be inspected if the work

is likely to disturb painted surfaces, and lead-based paint hazards must be abated if the project receives more than \$25,000 of federal funds per unit. Projects receiving less than \$25,000 per unit in federal funds for rehabilitation are required to reduce lead-based paint hazards through measures such as abatement or interim controls.

HUD is now in the process of rewriting and consolidating its lead-based paint related regulations to implement Title X.

State and Local Housing Requirements. State and local governments are the primary regulators of housing conditions through building and housing codes, landlord-tenant laws, and other requirements. Title X requires state and local governments completing Consolidated Plans (formerly known as Comprehensive Housing Affordability Strategies) to integrate lead poisoning prevention into their existing housing agendas and ongoing programs.²⁶ In addition, any changes in liability laws and insurance requirements concerning lead-based paint hazards will take place at the state level.

1.6 MAJOR CHALLENGES IN PREVENTING CHILDHOOD LEAD POISONING IN PRIVATE HOUSING

Cost of Hazard Evaluation and Control

Because of the pervasiveness of lead-based paint and lead-based paint hazards in the nation's private housing stock, efforts to control lead-based paint hazards will require a significant investment of private and public resources over an extended period of time. Given limited resources available to address this public health problem, particularly in the short term, permanent controls (full abatement) are not a financially realistic option for many property owners. In many situations, ongoing controls, such as paint stabilization, specialized cleaning, repairs, and continued monitoring and maintenance, can significantly reduce the risk of lead exposure at a relatively low cost. However,

The Major Challenges to Eliminating Childhood Lead Poisoning

- Cost of hazard evaluation and control
- Need for safe, affordable housing
- Lack of accepted hazard control standards
- Ineffective lead-based paint liability system
- Lack of affordable lead-based paint liability insurance

although these practices control lead hazards, they do not eliminate them. Although abatement of lead-based paint hazards entails higher short-run costs, it sometimes proves cost-effective by avoiding the costs of ongoing controls. In addition, the long-term efficacy of ongoing controls remains to be proven conclusively in different kinds of housing.

The cost of lead-based paint hazard evaluation depends on the size of the housing unit evaluated, its condition, and the extent of evaluation activities. Recent interviews with lead-based paint contractors and state officials familiar with lead-based paint hazard evaluation costs indicate that a lead-based paint inspection of single-family housing units ranges from \$150 to \$600 depending on unit size, including the cost of X-ray fluorescence (XRF) testing for all painted surfaces with a unique painting history and paint chip testing for surfaces with curved or ornate surfaces that cannot be tested with XRF instruments. A risk assessment for a single-family unit can range from \$200 to \$500 depending on the number of rooms. A hazard screen, an abbreviated risk assessment for units in good condition, costs from \$150 to \$300 per unit. These cost estimates include preparation, travel, on-site time, and report writing for certified paint inspectors and risk assessors.

Hazard evaluation costs for multifamily units are significantly lower than the costs for single-family units. Where only a sample of units in multifamily buildings needs to be evaluated, the average cost per unit can be less than 10 percent of the cost per single-

family unit. In other words, the cost of risk assessments or inspections may be \$30 to \$40 per unit. Even where each multifamily unit is evaluated, the costs may be only two-thirds of the cost for multifamily units for two reasons: (1) multifamily units tend to be smaller than single-family units; and (2) fixed costs for preparation and travel can be spread over many units in a multifamily building.

Lead-based paint hazard evaluation costs may also decline in the future. For example, lead-based paint contractors and state officials have noted that lab testing costs for dust and soil samples have declined from \$50 to \$30 per sample to as low as \$7 per sample as both the volume of samples and competition among test labs have increased.

The cost of hazard control activities is also subject to considerable variation depending on the size of the unit, its condition, and the extent of hazards. Lead-based paint contractors and state officials estimate that the average cost of addressing lead-based paint concerns while conducting interior paint stabilization of single-family units is approximately \$300 per unit interior stabilized and \$1,000 per unit exterior stabilized. (On average, the presence of lead-based paint increases the cost of stabilizing deteriorating paint by about one-third. If lead-based paint is intact, however, there are no additional costs.) The costs in particular units vary substantially around the average cost.

Lead-based paint contractors and state officials estimate that the average cost of interior paint stabilization per multifamily unit is approximately two-thirds of the cost per single-family unit because multifamily units tend to be smaller than single-family units and the fixed costs for preparation and travel can be spread over many units in a multifamily building. The average cost of exterior paint stabilization per multifamily unit can be relatively low because the exterior cost per multifamily building is spread over all of the units in the building. Similarly, the cost of covering bare soil depends on the square footage of bare soil – and per unit costs decrease as the number of units increases.

The timing of lead-based paint hazard evaluation and control activities also affects their cost and safety.

For example, these activities are less costly and safer when conducted in vacant housing units. They can also be much less costly when performed in conjunction with renovation or rehabilitation projects. Fortunately, knowledge about the best technologies for controlling hazards and the sources and pathways of most concern is rapidly improving. Nevertheless, further research is needed to develop and demonstrate effective, low-cost, and reliable hazard evaluation and control technologies and methods.

Even when employing the most cost-effective methods, many property owners cannot afford lead-based paint hazard evaluation and control without financing. Financing can be difficult to obtain. While lead-based paint hazard control work can restore a property's original value, it may not increase market value in most communities.

Housing Affordability and Economic Distress

Affordability is a major housing problem in the United States. The 1991 American Housing Survey found that 18.6 percent (6.3 million) of renters and 7.3 percent (4.1 million) of owner-occupants spend 50 percent or more of their income on housing. Of these renters and owner-occupants, 14.5 percent and 8.2 percent, respectively, live in housing with moderate to severe physical problems.

The gap between what tenants and owners can afford to pay and what is needed to maintain housing in acceptable physical condition creates economic distress for many properties. Economically distressed properties are those where a rental property's income or the income of a homeowner is insufficient to pay the costs of adequate maintenance, repairs, insurance, and taxes. A conservative estimate is that at least one-fifth of all housing units are economically distressed.²⁷ The 1991 American Housing Survey found that 20.2 percent (6.8 million) of all renters and 23 percent (12.9 million) of all homeowners live in economically distressed units.²⁸ In 1991, approximately 22 percent of pre-1978 rental units were occupied by families

with a young child. This is more than triple the proportion of distressed owner-occupied pre-1978 units with a young child.

Lead-based paint hazards constitute a significant threat in many economically distressed housing units and pose a challenge to our national commitment to provide decent, safe, and affordable housing for all families. Because distressed units tend to be older and in poorer condition, these units are much more likely to contain lead-based paint hazards. These units, by definition, cannot carry the cost of addressing many lead-based paint hazards.

Without additional subsidies, rigid mandates for lead-based paint hazard control would threaten the economic viability of many low-income units and/or force rents to be increased to unaffordable levels. Thus, to fulfill the national commitment to decent, safe, and affordable housing, public subsidies will be needed to reduce serious lead-based paint hazards in the economically distressed portion of the housing stock.

Lack of Standards for Controlling Lead-Based Paint Hazards in Private Housing

There are currently no broadly recognized standards that specify a protective and practicable set of actions to protect occupants from lead hazards in housing. Although most states impose a general duty on rental property owners to provide housing safe from hazards, there is no general agreement on the specific steps needed to protect occupants from lead-based paint hazards. For example, while peeling paint is a violation under most housing codes, the codes generally do not mention lead-contaminated surface dust, an important pathway of poisoning.

Some state and local governments have no laws or regulations specifically addressing lead-based paint or lead-based paint hazards. Where such laws and regulations do exist, they vary widely from jurisdiction to jurisdiction, both in terms of how hazards are defined and what control actions are needed. Few are health protective, many are not preventive because they focus on the presence of a lead-poisoned child, and some outdated regulations even call for corrective measures

that are now known to be dangerous. In addition, these existing laws are often not effectively enforced. At least one model code simply (and unrealistically) states that any lead-based paint constitutes a violation.

Ineffective Liability System

According to the U.S. General Accounting Office, cases involving liability for lead-based paint have failed to specify clear standards of hazard control for rental property owners. Customarily, standards of care for property owners have been established through the courts in an evolutionary, case-by-case process that builds on precedent. The tort system, which is the traditional route for trying to redress childhood lead poisoning, is designed primarily to compensate for harm done and only indirectly to foster prevention. Courts thus tend to be immersed in questions related to proof and measure of damages rather than broadly defining applicable prevention remedies.

Consequently, despite an increase in childhood lead poisoning liability claims, most state tort systems are not working effectively to prevent childhood lead poisoning. The vast majority of poisoned children receive no compensation or relief at all. Furthermore, the threat of liability does not appear to be motivating many rental property owners, particularly uninsured owners who are unlikely to be sued, to take actions to control lead hazards.

As the health care system tests more children for lead poisoning, the number of children identified as poisoned increases, as does the potential for tort litigation. This trend and occasional reports of million dollar lawsuits and “jackpot” awards have increased the concerns of rental property owners and their liability insurers. Without a clear set of hazard control standards, however, property owners lack specific guidance as to what they are reasonably expected to do to protect occupants from lead hazards and how to avoid future liability. While litigation has not been successful in establishing clear standards of hazard control in most states, the areas that have had the highest levels of litigation (Massachusetts and Maryland) have been at the forefront in adopting legislation and regulations

to make the standards of hazard control more explicit.

Lack of Affordable Lead-Based Paint Liability Insurance

Rental property owners and managers face increasing difficulty in obtaining insurance for lead poisoning liability claims. As a result of growing litigation and the fear of large awards, insurers have restricted or excluded lead poisoning coverage from their third-party liability policies, especially in areas with substantial numbers of claims. Where coverage continues to be available, it is often limited to newer, well-maintained housing. The lack of available insurance for rental housing units where serious lead hazards are likely to exist compounds the problem of ensuring compensation to injured children through the tort system. Damage claims may be filed against owners, but, without insurance, owners often lack the resources to compensate injured children or have insulated their assets to make them judgment proof.

The tight liability insurance market presents several additional problems:

- Responsible property owners with substantial equity in rental properties worry about having no insurance to cover lead poisoning liability suits. The loss of insurance may prompt such owners to sell or disinvest in older rental housing.
- By inhibiting investments in property maintenance and rehabilitation, the loss of liability insurance would impose a burden on the economies of many urban centers where older rental housing is often concentrated.
- In addition, the lack of coverage may encourage some owners to illegally refuse to rent to families with young children in order to avoid potential lawsuits.

Therefore, several challenges remain before the problem of childhood lead poisoning can be eliminated. The Task Force, through its recommendations in Chapters 3 through 10 of this report, identifies the most effective ways of meeting them given limited resources.

1.7 KEY TERMS USED IN THIS REPORT

This section explains key terms used in this report in order to help avoid confusion over terminology and to introduce the reader to the tools of lead hazard evaluation and control. Instead of an alphabetical listing, the terms are ordered below to build the reader's understanding of the elements of lead hazard evaluation and control. In addition to explaining each term's meaning, information is provided to give context and insight into its role in evaluating and controlling lead-based paint hazards. Unless noted otherwise, terms used in this report have the same meaning as established by Title X.

Lead-based paint is dried paint film that has a lead content equal or exceeding 1.0 mg/cm² by X-ray fluorescence (XRF) measurement or 0.5 percent (5,000 parts per million (ppm)) by weight. As explained below, not all lead-based paint presents a hazard to health.

Lead-based paint hazard is a condition that causes exposure to lead that would result in adverse human health effects. Title X defines the following as lead-based paint hazards: (1) deteriorated lead-based paint, (2) lead-contaminated dust, (3) lead-contaminated bare residential soil, and (4) lead-based paint (intact or nonintact) on friction, impact, and chewable surfaces. Intact lead-based paint on surfaces such as walls, ceilings, and baseboards is not considered a lead-based paint hazard.

Lead-contaminated dust is surface dust in residential dwellings that exceeds levels set by EPA as dangerous. In July 1994, EPA issued guidelines (not regulations) establishing the following advisory levels based on dust wipe sampling: 100 µg/ft² on floors, 500 µg/ft² on window sills, and 800 µg/ft² in window wells (troughs). Lead dust, which is a primary pathway of exposure to children through normal hand-to-mouth activity, can come from lead-based paint that is deteriorated, disturbed, or abraded or lead-contaminated soil tracked indoors. Lead dust is not visible to the naked eye and is difficult to clean up.

Lead-contaminated soil is bare residential soil

that has lead concentrations exceeding levels set by EPA as dangerous. EPA's July 1994 guidelines (not regulations) established a range of soil lead thresholds and responses based on the likelihood of use by children. In the case of bare residential soil with lead levels above 5,000 ppm by weight, the guidelines recommend abatement. In areas with a high likelihood of exposure to children, interim controls are recommended at 400 ppm; in areas where contact by children is unlikely, 2,000 ppm is the recommended trigger for interim controls. Significantly, residential soil that has ground cover or other cover is not considered a hazard. The primary sources of lead in soil are deteriorating exterior lead-based paint and past emissions of leaded gasoline, and, in limited cases, industrial paint sources such as smelters.

Lead-based paint inspection is an on-site, surface-by-surface evaluation to determine the presence of lead-based paint. Lead-based paint inspections are performed by trained inspectors who are certified by states pursuant to EPA standards. Inspectors are trained to use XRF devices that analyze painted surfaces (without disturbing the paint) to measure the amount of lead in a given area. Readings that fall within a range of uncertainty are confirmed by laboratory analysis of a paint chip.

Risk assessment is an on-site evaluation of a unit or a multifamily property to determine the nature, severity, and location of lead-based paint hazards and to identify options for controlling any lead-based paint hazards found. A risk assessment always includes a visual examination for deteriorating paint and collection of surface dust samples for laboratory analysis and may include samples of bare soil. Risk assessments are performed by trained risk assessors who are certified by states pursuant to standards set by EPA. Being an inspector is a prerequisite to being a risk assessor. Unlike the generic use of this term in environmental science, it is important to understand that a lead-based paint risk assessment really amounts to an exposure assessment rather than quantifying the probability of adverse health effects.

Hazard screen is an abbreviated, and hence lower

cost, risk assessment available for use in units in good physical condition. The hazard screen takes fewer dust samples and uses more stringent criteria than a full risk assessment. Failure of this screen triggers a full risk assessment.

Reevaluation refers to a follow-up risk assessment that checks on past hazard control measures and verifies that lead dust hazards do not exist.

Lead hazard evaluation is an umbrella term that encompasses lead-based paint inspection, risk assessment, combination inspection/risk assessment, lead hazard screen, or reevaluation.

Abatement means measures designed to permanently eliminate lead-based paint hazards (not necessarily treat all lead-based paint). Abatement strategies can include the replacement of a component painted with lead-based paint, the enclosure or encapsulation (with an approved encapsulant) of lead-based paint, the removal of lead-based paint from the building component, and the removal or permanent covering of lead-contaminated soil. Per Title X, abatement projects must be conducted by a trained contractor certified by states pursuant to EPA standards. Rigorous cleaning and passing dust tests are required at the conclusion of abatement projects. EPA regulations (proposed in September 1994) will define work practice standards for abatement. A mixture of abatement and interim/ongoing controls (see below) will be used to control lead-based paint hazards in many units.

Interim/ongoing controls are strategies such as specialized cleaning and paint stabilization used to manage lead-based paint in place to avoid exposure to lead-based paint hazards. In contrast to abatement's permanent elimination of lead-based paint hazards, interim/ongoing controls manage lead-based paint in place and require ongoing monitoring to ensure their effectiveness. The term interim controls has the same meaning as in Title X. Ongoing controls encompasses interim controls as well as Essential Maintenance Practices (see Exhibit 3-2) and Standard Treatments (see Exhibit 3-6). For many units, interim/ongoing controls will be used indefinitely.

Lead hazard control is an umbrella term that

refers to a range of measures taken to control or prevent lead-based paint hazards. In addition to controlling identified lead-based paint hazards through abatement and/or interim controls, this term is used by the Task Force to cover ongoing controls, such as Essential Maintenance Practices and Standard Treatments that control possible lead exposures, absent a risk assessment or lead-based paint inspection.

Specialized cleaning means using cleaning methods, products, and devices that are successful in cleaning up lead-contaminated dust, such as vacuum cleaners with appropriate filters and tri-sodium phosphate detergents or lead-specific detergents. Research is needed to see if other methods and products, such as common household cleansers and less expensive vacuums, can adequately clean up lead-contaminated dust.

Dust tests determine if the amount of lead in dust on a surface (such as a floor, window sill, or window trough) exceeds the thresholds set by EPA. Dust samples are usually taken by wiping a one square-foot area and having the amount of lead picked up by the wipe determined by a laboratory. Dust tests are performed as a part of risk assessments/lead hazard screens to determine if lead-based paint hazards exist as well as at the conclusion of lead hazard control work and during reevaluations to ensure adequate cleanup.

EBL child is a child aged one to five with a blood lead level that triggers an environmental investigation under the guidelines of CDC, currently one test at 20 µg/dL or above or two consecutive tests at or above 15 µg/dL. While response to the individual child is triggered by these levels, CDC has identified 10 µg/dL as the “level of concern,” and recommends that broad-based prevention strategies be aimed at this level.

Low income household refers to a household whose income is equal to or less than the income of a family earning 80 percent of the median income for that area of the country. HUD annually calculates this income threshold by family size for cities and counties throughout the country.

Economically distressed housing is privately-

owned, unsubsidized housing where the property owner cannot afford to correct physical conditions that pose a threat to the health and safety of the occupants of the unit, such as lead-based paint hazards. These owners do not have sufficient cash flow to make repairs nor the ability to repay a market-rate loan covering the cost of the needed improvements. Economically distressed housing includes properties with a continuum of financial needs. Some property owners have such limited income and resources that improvements, such as lead-based paint hazard control, are financially infeasible without subsidies. In owner-occupied units, economic distress is present when the homeowner has insufficient income, savings, or equity to cover the cost of correcting conditions that pose a health or safety threat. In rental units, economic distress is present when a property owner lacks the rental income and equity to obtain a loan covering the cost to correct conditions that pose a health or safety threat, such as lead-based paint hazards; or when units are occupied by low-income tenants and the cost to correct unsafe conditions would require rent increases that exceed what the tenants can afford to pay for housing.

Economically viable housing is housing where the owner can afford to correct lead-based paint hazards or other physical problems from existing financial resources, such as market-rate financing, rent increases, or funds from savings or other resources. These property owners have a moderate to high ability to pay for lead hazard control. It should be noted that there are no sharp dividing lines between economically distressed and economically viable units. Rather, the housing stock should be viewed as a continuum containing units that are economically viable, economically distressed, and somewhere in between.

1.8 STRUCTURE OF THE REPORT

It is clear from the foregoing summary that lead-based paint hazard evaluation and control is complex, with many aspects that must be addressed under numerous varying conditions and in varying housing markets. The Task Force’s recommendations, therefore, cover a range of issues and actions. The Task Force urges that

its recommendations be read and considered as a whole, and that policymakers refrain from considering either single recommendations or the contents of any single chapter outside of the broader context of the entire report.

Part I of this report provides introduction, background, and overview. Chapter 1 describes the nature and scope of the problem of childhood lead poisoning and the serious challenges it presents in our housing stock. Chapter 2 sets forth the overarching principles and reinforcing strategies that guided the Task Force in developing specific recommendations.

Part II of the report addresses standards of lead hazard control for rental housing and their implementation. Chapter 3 explains the importance and content of the benchmark standards of lead-based paint maintenance and hazard control proposed for consideration and adoption, with appropriate modifications to reflect relevant housing markets and conditions. Chapter 4 presents the Task Force's recommendations aimed at achieving broad implementation of the recommended benchmark standards, including special consideration due economically distressed units.

Part III of the report deals with resources and incentives: financing, insurance, and liability. Chapter 5 covers both opportunities to enhance private financing and actions that should be taken to provide the

critical additional resources necessary to control lead hazards in distressed housing. Chapter 6 deals with the complex issues of liability and insurance for rental property owners and contractors.

Part IV explores strategies for lead hazard control in different housing types. Chapter 7 contains proposals for matching households with young children or pregnant women with hazard-controlled units. Chapter 8 describes the potential immediate impact of implementing these benchmark standards in HUD- and other publically-funded tenant-based assistance programs. Chapter 9 consolidates the Task Force discussion on owner-occupied housing.

Part V addresses meeting educational and research needs. Chapter 10 describes a series of measures that will greatly increase awareness of lead hazards and measures to reduce them. Chapter 11 delineates specific topics on which additional research is urgently needed.

Guiding Principles and Reinforcing Strategies

Given the high cost of completely abating lead-based paint from all private housing units, the Task Force has identified a combination of reinforcing strategies intended to cost-effectively protect children from lead-based paint hazards. In developing and evaluating these strategies, the Task Force's deliberations have been guided by several overarching principles. These guiding principles and reinforcing strategies are reflected in the Task Force's recommendations throughout this report.

2.1 GUIDING PRINCIPLES

This section discusses the Task Force's ten guiding principles.

Principle 1. Lead-Based Paint Hazards Are a Costly Public Health and Housing Problem

Lead poisoning is the number-one environmental health hazard facing American children. Childhood lead poisoning causes many individual tragedies, and reduces the quality of life and productivity for those who are injured. It also forces the nation to spend large sums of money on health care, medical monitoring, and special education for poisoned children. In addition, lead-based paint poses a threat to the viability of millions of affordable housing units. Allocating public and private resources to address this problem in private housing will benefit both individual families and the nation as a whole.

Principle 2. The Answer to Lead Poisoning Is Prevention

Traditional approaches to childhood lead poisoning have been reactive: postponing action until after a child has been identified as poisoned. Many state and local laws and ordinances and some HUD regulations

(now being updated) still use the poisoned child as the primary or exclusive trigger for action to control hazards. The prescription for ending childhood lead poisoning is prevention: identifying and controlling excessive lead exposure in the child's environment before poisoning occurs. The ultimate goal is eliminating lead-based paint and other sources of lead exposure from the human environment. The extent of lead-based paint in U.S. housing, however, dictates that elimination must be a long-term goal. In the near term, lead-based paint hazards should be identified and controlled to ensure that families with a young child are housed in units safe from hazards.

Prevention strategies must recognize the importance of addressing lead-contaminated dust, which is the foremost pathway of childhood lead poisoning. Interior dust can be contaminated by lead-based paint and by lead in bare soil. The major sources of lead in interior dust include lead in paint, past emissions of leaded gasoline, and industrial waste. Deteriorating lead-based paint can also cause poisoning, both through the direct ingestion of paint chips and by contaminating dust and soil. In addition, deteriorating paint is often a sign of underlying problems, such as damage from moisture or substrate and structural defects, that must be fixed to avoid further deterioration.

Principle 3. Units with a High Likelihood of Lead-Based Paint Hazards Deserve Priority Attention

Because the scope and severity of lead-based paint hazards in housing are so variable, protection of children requires a priority-based approach that focuses attention and resources proportionate to risk. Lead-based paint hazard evaluation and control strategies need to be commensurate with the level of hazards present in

order to provide the most risk reduction for the resources invested. Taking action to control serious hazards in children's environments returns high benefits. Conversely, imposing expensive requirements on units that do not pose health hazards provides no health benefits. While units with children that have elevated blood lead levels clearly deserve high priority, units with a high likelihood of lead-based paint hazards also demand priority and intensive attention. Older, deteriorated, and lower value housing, and housing undergoing renovation and remodeling that disturb lead-based paint, typically present the greatest hazards.

Principle 4. A Range of Strategies and Shared Responsibility Is Needed

Lead hazards in the residential environment are the major cause of childhood lead poisoning and constitute a serious public health problem. Controlling residential lead hazards in millions of housing units is an extremely complex undertaking. The diversity of the housing stock and the variability of lead hazards (from no hazards to extreme hazards) make the cost-effective control of lead hazards challenging. No single strategy can be relied on to operate effectively and efficiently throughout the housing stock. A combination of strategies must be employed, including public subsidies, education, enlightened regulatory standards, enforcement, market forces, liability and insurance incentives, and rapid response to an EBL child. Many different groups, individuals, organizations, industries, and public agencies have critical roles to play in controlling lead hazards in housing.

Principle 5. All Participants in Preventing Poisoning Need More Information and Education

Many children are being poisoned because well-intentioned parents, property owners, contractors, doctors, and others are not fully and accurately informed about lead-based paint hazards and prevention strategies. Aggressive educational efforts are required to inform these groups. Education alone will not solve the problem of childhood lead poisoning, but it can complement other strategies by raising awareness and changing behavior. All involved parties need to understand:

Task Force's Ten Guiding Principles

1. Lead-based paint hazards are a costly public health and housing problem.
2. The answer to lead poisoning is prevention.
3. Units with a high likelihood of lead-based paint hazards deserve priority attention.
4. A range of strategies and shared responsibility is needed.
5. All participants in preventing poisoning need more information and education.
6. Property owners need flexibility in selecting health-protective strategies.
7. Market forces must be engaged as much as possible.
8. Public subsidies are vital to controlling hazards in economically distressed units.
9. State and local programs should be tailored to meet local needs.
10. Prevention programs should build on community-based organizations and should help build their capacity to resolve residential environmental problems.

- The dangers of deteriorating lead-based paint and lead-contaminated dust;
 - How to prevent lead-based paint hazards;
 - How to limit exposure;
 - Proper hazard evaluation and control methods; and
 - Sources of further information and assistance.
- Other messages should be tailored to specific audiences, such as rental property owners, homeowners, tenants, parents of young children, and real estate agents. Title X's real estate notification and disclosure provisions, which are expected to take effect in 1996, offer an important opportunity for educating both housing consumers and providers.

Principle 6. Property Owners Need Flexibility in Selecting Health-Protective Strategies

To prevent childhood lead poisoning, prudent health-protective standards must be achieved. However, requiring all property owners to follow a rigid, universal set of procedures to meet these standards would be inefficient and often unnecessary. It would ignore the significant differences in hazards and the complexities

of providing affordable housing. Instead of blanket requirements, responsible property owners should be allowed to conduct as a first step either hazard control measures or lead hazard evaluations followed by any needed controls. The Task Force recognizes that devoting funds directly to hazard control will provide greater health protection in some units than requiring evaluation first. In other units, hazard evaluation will be an important first step to cost-effective actions. When lead-based paint hazards are identified, property owners should be given discretion as to whether to employ abatement or ongoing controls, except in cases where abatement is the only way to control the hazard. Special strategies are necessary and appropriate in multifamily buildings, which present additional opportunities and often greater challenges for accomplishing lead hazard evaluation and control. Property owners also should be allowed to use specially trained in-house staff to the maximum extent possible to control hazards. In accordance with Title X, however, abatement, risk assessment, and lead-based paint inspections must be done by certified individuals.

Principle 7. Market Forces Must Be Engaged as Much as Possible

While expanded public subsidies are the critical missing ingredient for preventing poisoning in economically distressed units, it is neither efficient nor appropriate to rely on public subsidies to finance lead hazard control in economically viable segments of the housing stock. Private market forces, therefore, need to be harnessed to the maximum extent possible to stimulate private investment and ensure efficient resource allocation. Sources of private financing for lead hazard evaluation and control need to be expanded and made more accessible to property owners. Housing consumers must be carefully educated about the importance of protecting their children from lead hazards, and the appraisal industry should be educated to recognize changes in consumer preferences and the market value of lead safety as they occur. The current confusion over lead-based paint liability standards of care must be clarified so that the tort liability system

reinforces responsible behavior by owners of rental housing. Liability insurance provides a potentially powerful lever for prompting property owners to behave responsibly that needs to be re-engaged. Further, the incentive of limited liability will make owners undertake hazard control measures.

Principle 8. Public Subsidies Are Vital to Controlling Hazards in Economically Distressed Units

Policymakers must recognize that lead-based paint hazard control costs money and that the units with the worst hazards typically are those most economically distressed. Effectively controlling hazards in these units will generally require substantially increased public subsidies because market forces will not alleviate the problem. Without significant additional public subsidies, lead-based paint hazards will not be controlled; children will continue to be poisoned; and these units may be lost from the affordable housing stock. Strategies to control lead hazards in housing must be designed within the context of overall housing policy because lead-based paint and dust hazards are only one aspect of our housing crisis. A goal of this Task Force is to increase and preserve the supply of decent, safe, and affordable housing for all Americans.

Principle 9. State and Local Programs Should Be Tailored to Meet Local Needs

The Federal Government is responsible for establishing standards for lead-based paint safety, such as hazardous levels of lead in dust and soil and standards for training and certifying lead-based paint hazard evaluation and abatement contractors and workers. State and local governments are generally responsible for implementing programs to achieve these standards. Because of significant differences among jurisdictions with respect to the housing stock, the extent of lead-based paint hazards, and the existing infrastructure of public and private health, housing, and environmental programs, a “one size fits all” set of hazard control stan-

dards is inappropriate. State and local jurisdictions must have the flexibility to devise strategies to meet local needs and conditions. State and local strategies, however, should be health-protective, technically sound, practical to implement, and specific enough to make clear private owners' responsibilities.

Principle 10. Prevention Programs Should Build on Community-Based Organizations

Neighborhood organizations, churches, community development groups, minority and ethnic associations, volunteer organizations, and other community-based organizations in neighborhoods with concentrations of higher priority housing are often well suited to participate in or initiate neighborhood-based approaches to reducing lead hazards. The Task Force encourages the building of the capacity of community-based organizations to perform all aspects of lead-based paint poisoning prevention. Community-based organizations could provide education, maintenance, inspection, risk assessment, ongoing controls, and full abatement.

Community-based organizations can have the advantages of:

- **Geographic location** within the neighborhoods they serve;
- **Familiarity with and understanding** of the languages and cultures within their community and its members;
- **Adaptability** to changing conditions derived from their limited bureaucracy and their control by community members; and
- **Ability to offer holistic solutions** by easily integrating energy conservation and other environmental and housing concerns into lead-based paint programs.

Community groups in these neighborhoods are encouraged to obtain the training certifications and resources that are required to educate community members about the causes of and solutions to lead-based paint hazards; to help identify potentially hazardous conditions and ensure that they are properly

addressed; and, with the concurrence of owners and residents, to perform hazard control activities and related building operations and maintenance work. The Task Force recognizes the legal responsibility of fulfilling the requirement of Section 3 of the Housing and Community Development Act of 1968 for employment of low-income people and contracting with community-based businesses in HUD-funded activities. Employing qualified community-based businesses and residents in hazard evaluation and control activities will help create job and career opportunities in disadvantaged and minority neighborhoods, where the problems of childhood lead poisoning are usually worst.

2.2 REINFORCING STRATEGIES

A combination of reinforcing strategies must be employed to cost-effectively control lead-based paint hazards in private housing. As described earlier, no single strategy can be relied on to protect children from lead-based paint hazards in private housing. Thus, the Task Force's recommendations must be seen as an integrated whole, the separate pieces of which work together to reinforce each other. Exhibit 2-1 highlights these reinforcing strategies.

Reasonable, Protective, Specific, and Enforceable Standards of Hazard Control

Most state and local laws and regulations are neither health-protective nor clear about what measures a rental property owner needs to take to protect children from lead-based paint hazards. The resulting confusion serves the interests of neither property owners nor children. Without protective, practical, specific, and enforceable standards, lead-based paint hazard evaluation and control in private housing is unlikely to occur on a broad scale.

The Task Force has placed great emphasis on developing national benchmark standards of hazard control with sufficient specificity to be meaningful. Chapter 3 presents these benchmark standards. Based on the Task Force's judgment and current knowledge, these standards make clear the steps necessary to pro-

Reinforcing Strategies for Lead Hazard Control

All efforts to control lead-based paint hazards and protect young children from lead poisoning are related: Every piece—standards, incentives, resources, education, research, and sensible approaches for a variety of housing types—is important and connected.

WORKABLE AND PROTECTIVE STANDARDS FOR RENTAL HOUSING

Adopt Benchmark Standards of
Hazard Control

Implement the Standards and
Promote Compliance

APPROACHES FOR DIFFERENT HOUSING TYPES

Match Units with Households

Develop Actions Appropriate for
Tenant-based Assistance Programs
and Owner-Occupied Housing

RESOURCES AND INCENTIVES

Provide Public and
Private Financing

Modify the Liability and
Insurance Systems

EDUCATION AND RESEARCH

Increase Public Awareness

Promote Research on Cost-Effective
Hazard Evaluation and Control
Methods

tect children from lead-based paint hazards in rental units and to identify when action is needed. These standards recognize the variation in lead-based paint hazards across the housing stock by placing appropriate emphasis on higher priority housing and allowing property owners the flexibility to choose among optional approaches to implement these standards.

The Task Force believes that if these benchmark standards become widely recognized, the national response to lead-based paint in private housing will be much more rational, efficient, and protective. These standards should be of interest to lenders and insurers as well as rental property owners and tenants. The Task Force expects that as standards of hazard control are incorporated into laws and regulations, state and local governments will adjust these benchmark standards based on local needs and conditions and to reflect scientific and technical advances.

Rapid Response to an EBL Child

Traditionally, no action has been taken to identify or control lead-based paint hazards in housing until after a child has been identified as poisoned. The central focus of Title X, as well as this Task Force report, is to stimulate action before children are poisoned. At the same time, the case of the EBL child cannot be overlooked, as poisoned children—by definition—are at highest risk of injury from lead-based paint hazards in housing.

Current responses to EBL children vary widely from state to state and city to city. Many public health departments utilize case management systems to serve families with an EBL child. More often, only limited assistance is available. Some rental property owners correct hazards in response to notification of an EBL child; others routinely evict families who report an EBL child. The Task Force feels that, in addition to any local health department response, rental property owners must play a role in responding to EBL children. Specific recommendations regarding an owner's response are presented in Chapter 3.

More Intensive Efforts to Identify Lead-Based Paint Hazards and Enforce Any Required Controls

Tenants, owners, lenders, insurers, and public agencies all have important roles to play in identifying lead-based paint hazards. For example:

- The Task Force calls for property owners to make regular visual checks for deteriorating paint and to post notices requesting tenants to report deteriorating paint.
- Liability insurers can encourage property owners to identify and control deteriorating paint through their underwriting standards.
- Local governments can be more aggressive in enforcing local housing codes. In fact, many children are being poisoned by conditions that violate existing housing codes. Because resources are limited, it is essential that local enforcement efforts focus on high-priority units.

Chapter 4 suggests a number of strategies for making local enforcement efforts more effective and efficient.

Increased Availability of Private Financing for Economically Viable Units

Wherever possible, private funds should be used to control lead-based paint hazards in the private housing stock. Given the cost of hazard control, many property owners will be unable to pay for these measures without financing. Obtaining financing can be difficult, however, because lead hazard control does not currently increase property values in most communities. Lenders, therefore, are limited in their ability to supply financing consistent with sound underwriting standards. To partly overcome these limitations, the Task Force, in Chapter 5, encourages HUD and the primary and secondary financing market to take specific actions to increase both the availability of private financing and public understanding of available financing sources.

The widespread use of financing to purchase residential properties also creates an opportunity to stimulate lead-based paint hazard evaluation and control. The Task Force urges primary and secondary market lenders to recognize benchmark standards of hazard control and apply them, as appropriate, to rental properties.

Targeted Subsidies for Economically Distressed Units

The worst lead-based paint hazards are in older, economically distressed units. The stark economic reality is that these hazards generally cannot be controlled without public subsidies. Because resources are limited, subsidies must be targeted to high priority units and families at risk of poisoning. Taking a priority-based approach requires that first priority be given to units with poisoned children and distressed rental units containing serious lead hazards serving very low-income families with a young child or a pregnant woman. Subsidies for lead hazard control should not be directed to units that present other serious structural hazards unless rehabilitation funds are available to correct these hazards.

Insurance and Legal Liability Incentives for Property Owners

Rental property owners and their insurers are uncertain about what actions are necessary to control lead-based paint hazards and minimize or eliminate the risk of future liability for lead poisoning. This uncertainty has severely limited the availability of lead-based paint liability insurance, which protects property owners and provides a source of compensation for poisoned children.

To reduce this uncertainty, the Task Force has developed recommendations relating to insurance and liability that complement the standards of lead-based paint maintenance and hazard control discussed in Chapter 3. Chapter 6 presents these recommendations for changing state insurance and liability systems to prevent childhood lead poisoning and improve the adequacy and timeliness of compensation to poisoned children. Once clear standards of hazard control are in place, property owners will be in a position to demonstrate their compliance with the standards and insurers will be more willing to offer insurance at reasonable rates. In addition, incentives incorporated into state liability laws could encourage rental property owners to control lead-based paint hazards in return for limits on their potential liability.

Liability, Insurance, and Bonding Incentives to Increase the Availability of Lead-Based Paint Hazard Control Services

Dust and lead-based paint chips that are generated during lead-based paint hazard evaluation and control, renovation, remodeling, and/or other home improvement activities are potential liability risks for contractors and risk assessors. As a result, the availability and affordability of liability insurance coverage and surety bonding for contractors will affect the number and type of contractors performing lead-based paint hazard evaluation and control—particularly small, community-based firms. Chapter 6 recommends that federal and state agencies consider methods to increase the ability of small firms and community groups to obtain lead-based paint hazard evaluation and control contracts including set-asides, relaxed requirements for small or community-based contractors, and grants to help cover start-up costs.

“Matching” Strategies to Increase the Benefit of Investments in Lead Hazard Control

An important strategy is the “matching” of units that do not contain lead hazards with families with a young child in a manner consistent with fair housing laws. Because only about one of five households has a child under age six, all children can be protected long before lead-based paint hazards in the entire housing stock are controlled. Obviously, when investments are made to control lead hazards in any unit, the health benefits are not immediately realized unless a young child spends time in that unit. The strategy of matching at-risk families with hazard controlled units, therefore, increases the benefit of investments in lead-based paint hazard evaluation and control. Families with an EBL child deserve special priority. In addition, public subsidies offer an excellent opportunity to advance matching objectives. For example, the Task Force recommends that subsidies for owner-occupants be reserved for families with a young child living in units with lead-based paint hazards. The Task Force’s specific recommendations on matching strategies are presented in Chapter 7.

Using HUD Tenant-Based Programs as a Model for Private Property Owners

While Title X includes specific mandates for some federal housing programs, HUD has broad discretion in regulating lead-based paint hazard control efforts in other programs. An important means of achieving broad acceptance of benchmark standards of maintenance and hazard control is having HUD adopt, apply, and tailor these standards to federal housing programs. In some cases, such as the tenant-based programs that closely resemble purely private housing, the Task Force believes that HUD and local housing agencies have an important opportunity to put the proposed standards of maintenance and hazard control into practice and advance their broad recognition. The Task Force's recommendations related to lead hazard evaluation and control in tenant-based programs are included in Chapter 8.

Education to Raise Awareness and Motivate Behavior Change

While education cannot be viewed as a substitute for regulatory standards, enforcement, or subsidies, it is an essential tool for preventing poisoning. By raising awareness of childhood lead poisoning problems and solutions, education creates the impetus to address lead-based paint hazards. Therefore, to the extent that educational efforts help modify the behavior of property owners, tenants, and other parties, such efforts can be a major low-cost means of preventing childhood lead poisoning. The Task Force's recommendations on education strategies to motivate positive behavioral changes are presented in Chapter 10.

Research on Cost-Effective Hazard Evaluation and Control Methods

During the past five years, information and knowledge about lead-based paint hazards has increased exponentially. Most significant, the importance of lead dust as a pathway of poisoning has become fully appreciated, and, as a result, substantial advances have been made in work practices and procedures for dust control and containment, worker protection, cleanup, and dust testing. Federal agencies, such as HUD and EPA, are already engaged in research programs to better understand exposure pathways and find more reliable and cost-effective methods of hazard evaluation and control. The private sector has also responded with new technologies and products for identifying lead in paint, dust, soil, and other media and for removing and encapsulating lead-based paint.

While there are safe and effective methods to evaluate and control lead-based paint hazards, many technical questions remain and more cost-effective techniques are urgently needed. For example, definitive information is required on the rate of lead dust reaccumulation in units following hazard controls. Information is also required by federal agencies to set performance standards for products such as encapsulants and spot test kits, so that consumers are protected from inferior products in the marketplace. The Task Force's specific recommendations on research needs and priorities are presented in Chapter 11.

Easy References to Recommendations

Throughout the report, strategies for owner-occupied units are identified in various chapters. These are consolidated for easy reference in Chapter 9. The Executive Summary consolidates all the Task Force recommendations and identifies the intended audience of each.

Lead-Based Paint Hazard Control Standards for Rental Housing

Lead-based paint maintenance and hazard control standards are centrally important to lead hazard control efforts because they serve as the basis for translating knowledge about the sources and effects of lead poisoning into action to prevent the disease. Specifically, the benchmark standards for lead-based paint hazard control set forth in this report are a set of actions that an owner of a pre-1978 rental housing unit needs to take to protect young children and pregnant women from lead-based paint hazards.

3.1 ROLE OF LEAD-BASED PAINT HAZARD CONTROL STANDARDS

What Are Benchmark Standards for Lead-Based Paint Hazard Control?

These benchmark standards describe the steps needed to control lead hazards in units that may contain lead-based paint, as well as the events and conditions that trigger these actions. They are intended to fill the most critical gap in the current lead hazard control scheme—the lack of broadly recognized standards to guide owners and other parties in their choice and application of effective and efficient lead-based paint maintenance and hazard control interventions. The Task Force thus intends these standards to serve as a national benchmark to guide state and local governments, property owners, insurers, lenders, and others in addressing lead-based paint in housing.

The Task Force recognizes that, in many cases, jurisdictions will need to modify these standards to reflect local housing characteristics.

These lead-based paint maintenance and hazard control standards have been developed for owners of rental housing (including single-family rental units as well as apartment buildings) because of the immediacy of liability and insurance concerns. At the same time, their implementation by homeowners is encouraged because the technical measures included in the standards will also be effective in protecting children in owner-occupied units. Chapter 9 summarizes strategies designed for owner-occupied units.

Chapter 10 addresses the important role of parents in preventing childhood lead poisoning, including the importance of cooperation and communication between property owners and tenants in rental housing.

The Benefits of Benchmark Standards of Lead-Based Paint Maintenance and Hazard Control

A set of national benchmark standards will help reduce the current confusion over appropriate responses in several ways, benefiting both property owners and children.

- Benchmark standards provide the basis for more uniform, protective, and cost-effective state and local laws and regulations related to lead-based paint hazard control and help owners understand the steps they need to take to protect occupants from lead hazards in housing.
- Benchmark standards provide a basis for insurers to underwrite lead-based paint liability coverage for owners of rental housing. If property owners follow standards and the legal system recognizes these standards as establishing the steps a reasonable property owner should take, liability risks would become predictable and insurable.

- Benchmark standards provide owners the ability to demonstrate compliance. In addition, these standards can serve as the basis for state legislatures to limit the liability of rental housing owners who have independent documentation of compliance. Many believe that limiting the liability of owners who have such documentation would provide clear incentives for measures that reduce lead hazards and protect children from poisoning.
- Benchmark standards help to protect children's health in low-income properties by ensuring the effectiveness of improvements to be financed with public subsidies for lead hazard control. The standards also set clear priorities for action.
- Benchmark standards provide a basis for classifying units in a way that will support local efforts to match families with a young child or a pregnant woman with units in which lead-based paint hazards have been controlled.

Qualifications and Limitations

These benchmark lead-based paint maintenance and hazard control standards are intended to establish the actions that prudent property owners need to take to protect occupants from lead-based paint hazards. To avoid increasing the costs of compliance, the Task Force in many cases omitted from its recommendations additional control measures and more extensive dust testing that would further increase confidence that any lead hazards have been controlled. Whenever good practice calls for additional actions beyond those specified by the standards, the Task Force urges property owners to take further steps to evaluate and control lead-based paint hazards.

The Task Force has designed these recommendations based on the best information currently available and in recognition of the gaps and uncertainties in current knowledge. As more information becomes available, such as reaccumulation rates of lead in interior surface dust, these recommendations may need to be changed. As technology advances and costs decline (such as those for measuring lead in paint and dust), more aggressive and extensive measures may be feasible and appropriate.

While most property owners will be able to afford the costs of implementing these standards, the Task Force recognizes that some will not. Indeed, it is impossible for an insolvent owner of a unit with a zero or negative cash flow to bear *any* additional costs. Unfortunately, units in greatest financial distress tend to have the worst lead hazards, emphasizing the urgent need for expanded efforts to improve, preserve, and expand low-income housing, and to make available additional public subsidies.

3.2 COMPETING POLICY CONSIDERATIONS

The objectives of health protectiveness and practicality often compete in designing standards of lead-based paint maintenance and hazard control, because the cost of control measures increases with their scope and permanence. The Task Force has tried to develop standards that are both protective and affordable—an inherently difficult task. Unless the measures called for are protective of children's health, their implementation is pointless. At the same time, as the cost and intensity of hazard control standards increase, the likelihood of the standards being broadly implemented decreases. This section discusses the competing policy considerations that confronted the Task Force and the approach taken to make benchmark standards both practical and protective.

Specific Standards vs. Appropriate Flexibility

The Task Force concluded that offering broad observations and general recommendations on hazard control standards would serve little useful purpose. The current confusion over the standard of care related to lead-based paint in rental housing can only be resolved by a set of standards that clearly and explicitly defines the actions property owners need to take to protect occupants from lead hazards. At the same time, prescriptive standards risk being inflexible, failing to anticipate every contingency, and precluding advances

in lead hazard evaluation and control technologies that are occurring steadily.

The Task Force has tried to explain the principles and rationale that underlie each recommendation and to be as clear and specific as possible. In many cases, however, the Task Force found it more appropriate to couch recommendations in terms of performance standards and to offer examples instead of fixed requirements. State and local regulatory agencies will need to translate these benchmark standards into more specific, enforceable regulations.

Consistent Set of Standards vs. Units with Widely Variable Lead-Based Paint Hazards

Developing a patchwork of different standards for different situations would do little to dispel the current confusion. At the same time, the Task Force's desire to develop a single set of benchmark standards was frustrated by the wide variation in lead-based paint hazards across the housing stock (from no hazards to extreme hazards) and the wide differences in housing age, condition, ownership, occupancy, and construction. Inevitably, a one size fits all set of standards would provide inadequate protection in some units and overkill in others.

The Task Force decided to take a priority-based approach and to distinguish "higher priority" units from other pre-1978 units. These standards call for owners of all pre-1978 rental units that may contain lead-based paint to perform certain low-cost maintenance practices and to respond to notification of an EBL child (see definition in Section 1.7) or an identified lead-based paint hazard. While implementation of these baseline requirements will help to avoid and reduce lead exposure, by themselves they do not provide enough assurance of protection to allow the matching of at-risk families or to limit statutory liability. Further, these baseline requirements are not sufficient for units known or suspected to contain extensive lead-based paint hazards. Therefore, owners need to undertake additional actions to address lead-based paint in "higher priority" units (units that are pre-

sumed to pose a higher risk of lead hazards, absent unit-specific data). The Task Force's benchmark criteria and recommendations to state and local governments for defining higher priority units are provided in Section 3.5.

Identifying and Targeting Lead-Based Paint Hazards vs. the Costs of Evaluation

It is easy to agree that it makes sense to direct attention and resources to those units that contain lead-based paint hazards. The challenge is to identify which units have hazards. Most property owners are convinced that their units are not hazardous. And while millions of units do not contain lead hazards, millions do—as evidenced by the fact that almost 9 percent of all U.S. preschoolers have blood lead levels at or above 10 µg/dl. The only way to determine conclusively that a pre-1978 unit does not contain lead-based paint is to perform a lead-based paint inspection—and the only way to confirm that lead-based paint hazards do not exist is to perform a risk assessment (or lead hazard screen). While lead-based paint inspections and risk assessments provide valuable information, they also entail expense, and many property owners would prefer to spend available resources on hazard control rather than on evaluation.

The Task Force has therefore designed these benchmark standards to provide owners of higher priority units with the option of undertaking either hazard evaluation or hazard control as a first step. In most cases, these standards permit property owners to bypass a lead-based paint inspection or risk assessment and instead undertake prescribed maintenance and hazard control measures. For many properties, this may be the more cost-effective approach. For other properties, owners will benefit by first conducting a lead-based paint hazard evaluation (an inspection, risk assessment, or lead hazard screen).

- An inspection may document that no lead-based

paint is present, thus exempting the unit from these standards entirely—or indicate that only a few surfaces contain lead-based paint.

- A risk assessment may document that no lead-based paint hazards are present, obviating the need for expenditures on control actions and giving the owner documentation of compliance with standards, which may be of assistance in obtaining insurance or qualifying for limitations in legal liability. Or, a risk assessment may pinpoint only one or a few hazards, which can be controlled by targeted measures at reduced cost.
- A lead hazard screen is an abbreviated (and thus lower cost) risk assessment that uses more stringent criteria for lead-based paint hazards. Many owners of pre-1978 units in good physical condition will find this lower cost evaluation tool to their advantage. However, when a lead hazard screen identifies a lead-based paint hazard, a full risk assessment is needed.

Early Attention to Lead-Based Paint Hazards vs. the Turnover Opportunity

Obviously, there is value in promptly responding to deteriorating lead-based paint. At the same time, activities that involve the repair or disruption of deteriorating paint in occupied units can be among the most hazardous, requiring careful attention to protect occupants and their belongings. Property owners strongly prefer doing work when units are vacant, and lead-based paint hazard control work can usually be integrated into maintenance, repainting, and repair work that should be performed by owners at turnover.

In designing these benchmark standards, the Task Force has relied on unit turnover as a primary trigger for action. When a lead-based paint hazard is identified in a unit occupied by a family with a young child or a pregnant woman, these standards call for prompt control action (with proper safeguards). In other cases, these standards allow hazard control to occur when the unit becomes vacant.

Early Broad-Scale Implementation vs. Training Requirements

The more that maintenance and other personnel are trained in how to conduct lead-based paint maintenance and hazard control activities, the greater the likelihood that their efforts will be effective in preventing and controlling hazards. At the same time, requirements for extensive training and certification increase costs, especially in job categories subject to high staff turnover.

While federal law requires that abatement projects, lead-based paint inspections, and risk assessments (and lead hazard screens) be conducted by certified individuals, the Task Force believes that property owners' crews can be trained to conduct maintenance work and Standard Treatments. EPA and HUD are now developing a model curriculum for a one-day operations and maintenance/interim controls training course. While there are no federal requirements for this course, the Task Force believes that it will have great utility to private owners and managers of pre-1978 units. In addition to improving the quality of maintenance and lead hazard control work, this course will greatly reduce the potential of maintenance crews inadvertently creating lead-based paint hazards during maintenance, repair, and repainting activities (see Section 3.4). This training course will also fulfill Occupational Safety and Health Administration (OSHA) requirements related to lead in the workplace.

Assurance that Lead Dust Hazards Are Controlled vs. the Costs of Testing

Lead-contaminated dust is a primary pathway of poisoning to children, yet this hazard is often overlooked or neglected. Most state and local laws and regulations currently ignore lead-contaminated dust; indeed, most hazard control projects conducted in the homes of EBL children fail to include tests to ensure that lead dust hazards are not left behind. The Task Force has placed strong emphasis on controlling lead dust hazards in these standards. Because lead dust may not be visible to the naked eye, testing is the only way to confirm that lead-contaminated dust levels fall within acceptable limits. At the same time, collecting and analyzing dust samples cost money. Determining

when dust testing is needed (and who should perform the tests) proved to be one of the most difficult issues the Task Force addressed.

These benchmark standards incorporate dust testing according to the likelihood that lead dust hazards will be present, as described below:

- In units presumed to be lower priority, dust tests are not called for routinely.
- When Standard Treatments are performed in higher priority units (the presence or absence of lead-based paint hazards being unknown), sufficient dust testing is needed to provide a reasonable assurance of compliance. After the proficiency of established cleaning crews has been demonstrated, testing using a representative sampling scheme of a subset of units may be used (except in units occupied by a young child or a pregnant woman). After Standard Treatments, dust tests may be performed by either the property owner (with proper training) or a certified individual.
- In units with an EBL child or where lead-based paint hazards have been identified by a risk assessor, dust tests performed by a certified individual are needed after hazard controls in all units.
- If property owners want to qualify for any liability limitation, compliance with standards (including dust tests) needs to be verified by an independent certified individual.

The Task Force believes that, in cases in which dust tests are not called for by these standards, many owners will still find it in their interest to document compliance through dust tests. The Task Force emphasizes that documented verification of compliance by independent dust testers is a prerequisite to any liability limitation. It should also be noted that federal law requires clearance dust tests at the conclusion of abatement projects. Specific provisions regarding dust testing are detailed in each section of this report.

Opportunities vs. Challenges in Multifamily Buildings

The benchmark standards primarily focus on individual housing *units*. Because multifamily buildings typically have common painting and maintenance histories, they present special opportunities, since property-wide approaches may be more appropriate, protective, and efficient. Multifamily buildings offer flexibility to provide children early protection from lead-based paint hazards in the following ways:

- Directing accelerated attention to evaluating lead-based paint hazards in the subset of units occupied by families with a young child or a pregnant woman;
- Allowing families with a young child to relocate to a hazard-controlled unit to avoid the risks attendant to conducting extensive work in an occupied unit; and
- Simultaneously addressing particular components of concern in units throughout a multifamily property, rather than postponing action until units turn over one by one.

These standards therefore provide owners of multifamily properties (and multiple properties) the option to implement property-wide strategies through a Lead Hazard Control Plan (see Section 3.7).

3.3 OVERVIEW OF LEAD HAZARD CONTROL STANDARDS

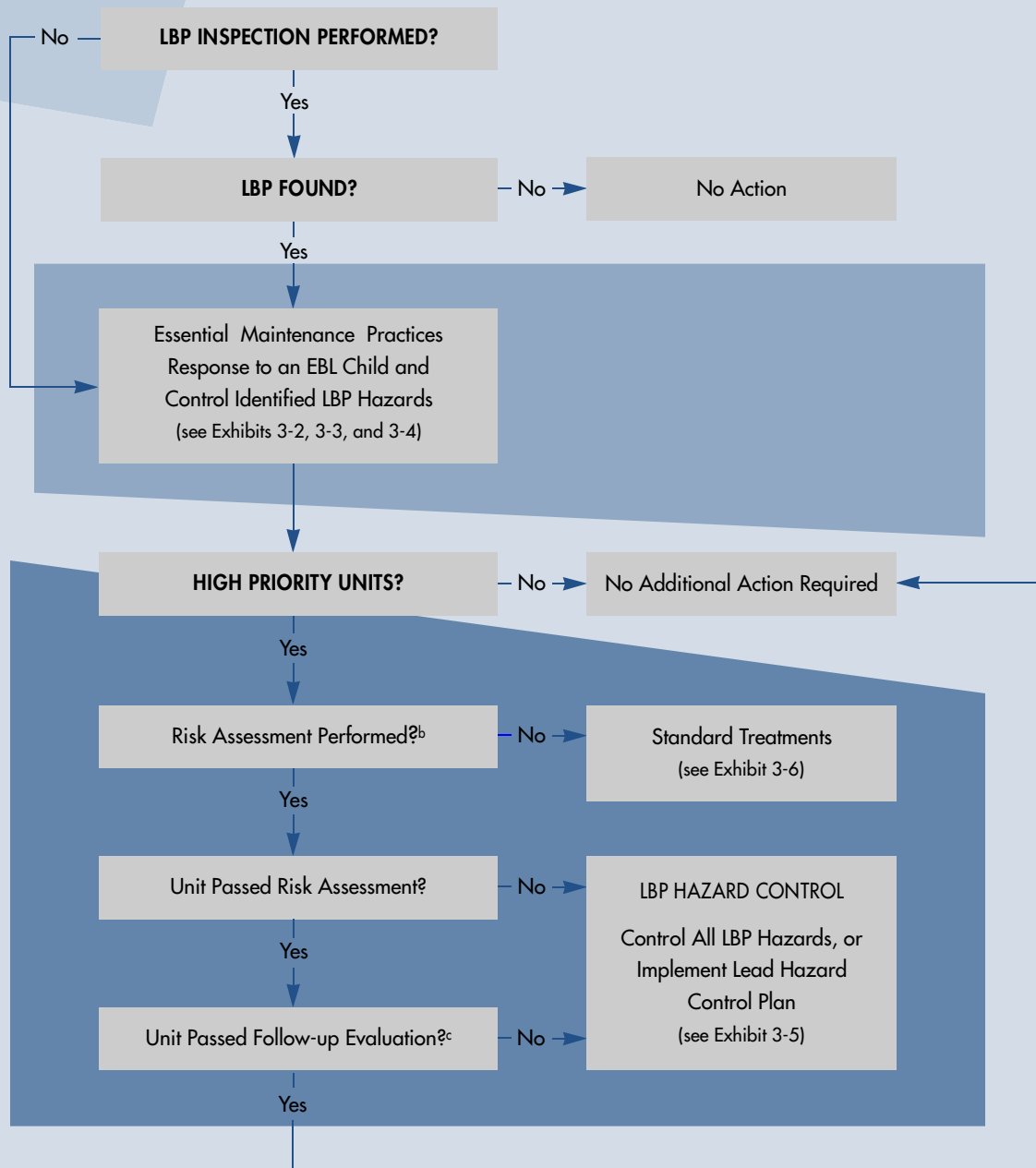
This section and Exhibit 3-1 provide an overview of the structure of the benchmark standards for lead-based paint maintenance and hazard control recommended by the Task Force.

Housing Units Covered by Standards

These standards have been designed for rental units that qualify as “target housing” as defined in Title X, regardless of subsidy status or type of construction (single vs. multifamily). This includes all rental housing units constructed prior to 1978, the year of the federal ban on leaded residential paint (unless jurisdictions banned lead-based paint earlier), with the following exceptions per Title X:

- Efficiency apartments (zero-bedroom units), unless occupied by a child under age six; and

How LBP Hazard Control Standards Apply to Pre-1978 Rental Housing Units^a



^a Based on Title X, efficiency apartments and units for occupancy by elderly individuals or persons with disabilities are excluded, unless occupied by a child under age 6. Units that can document that no LBP is present or that all LBP has been abated are also excluded.

^b Property owners can perform a full risk assessment or a lead hazard screen. However, properties that fail a lead hazard screen will need to have a full risk assessment conducted to identify the nature and location of LBP hazards in the unit.

^c Units that pass two consecutive evaluations (risk assessments, lead hazard screens, or reevaluations) are no longer classified as higher priority units. However, these units still need to comply with the basic requirements that apply to pre-1978 units.

- Housing for the elderly or persons with disabilities, unless occupied by a child under age six.

Application of Standards and Property Owner Options

Exhibit 3-1 illustrates how these standards apply to different categories of units and the options available to owners for meeting these standards (or exempting their units). The upper half of Exhibit 3-1 applies to all pre-1978 rental units; the lower part applies to higher priority units. Owners of all pre-1978 units have the option of having an independent, certified inspector conduct a lead-based paint inspection. If a lead-based paint inspection documents that the property is free of lead-based paint (or has had all lead-based paint abated), it may benefit the owner in securing insurance and in any legal actions should an EBL child be identified. (According to HUD estimates, more than 10 million pre-1978 units do not contain any lead-based paint.)

All Non-Exempt Pre-1978 Units. Owners of all pre-1978 rental units that have not been found free of lead-based paint need to:

- Perform Essential Maintenance Practices (Exhibit 3-2),
- Respond to an EBL child (Exhibit 3-3), and
- Control any lead-based paint hazards identified (Exhibit 3-4).

Additional Measures for Higher Priority Units.

Additional standards apply to higher priority rental units. Higher priority units are presumed to pose a higher risk of lead-based paint hazards until and unless a risk assessment has been performed to provide unit-specific data on lead-based paint hazards. (See Section 3.5 for discussion of criteria for classifying units as higher priority.) Under the benchmark standards, owners of higher priority units that have not been found to be free of lead-based paint may use either of the following two approaches:

- Obtain a risk assessment from an independent, certified risk assessor and control all lead hazards

(Exhibit 3-4) or implement a Lead Hazard Control Plan (Exhibit 3-5), or

- Implement Standard Treatments (Exhibit 3-6).

3.4 STANDARDS APPLICABLE TO PRE-1978 RENTAL UNITS

Essential Maintenance Practices

Millions of pre-1978 units contain intact lead-based paint yet do not present lead-based paint hazards. However, lead-based paint can deteriorate, resulting in lead exposure, and repainting and maintenance projects that entail removing or significantly disturbing lead-based paint can be among the most dangerous. Paint removal practices that are known to be unsafe, such as open flame burning and uncontained power sanding, are in common use by painters and other contractors across the country today. The Task Force therefore believes that the adoption of Essential Maintenance Practices will avoid or reduce lead exposures in millions of lower risk pre-1978 units.

Essential Maintenance Practices are intended to reduce the chance that hazards will develop, avoid the inadvertent creation of hazards, and provide an early warning system to alert owners to deteriorating paint. Essential Maintenance Practices are relatively inexpensive additions to existing code requirements (which generally prohibit the presence of peeling paint) that can be integrated into existing maintenance practices performed by in-house maintenance staff who have sufficient knowledge of lead-based paint hazards. Section 3.9 provides illustrative cost estimates for Essential Maintenance Practices and other measures in different properties.

Exhibit 3-2 presents the six Essential Maintenance Practices applicable to all non-exempt pre-1978 rental units. In recommending these measures, the Task Force does not mean to imply that these measures alone will be sufficient for projects that create significant amounts of lead dust, such as large-scale demolition projects. The Task Force notes that an EPA

Essential Maintenance Practices for Property Owners

1. **Use safe work practices** during work that disturbs paint that may contain lead to avoid creating LBP hazards.
 - Do not use unsafe paint removal practices, including:
 - Open flame burning;
 - Power sanding or sandblasting (unless a special vacuum attachment is used to contain dust);
 - Water blasting; and
 - Dry scraping more than a *de minimis* surface area (for example, more than one square foot per room).
 - Use good work practices and take precautions to prevent the spread of lead dust (for example, limit access to the work area only to workers; cover the work area with six mil polyethylene plastic or equivalent; protect workers; protect occupants' belongings by covering or removing from the work area; wet painted surfaces before disturbing; and wet debris before sweeping).
 - Perform specialized cleaning of the work area upon completion of work using methods designed to remove lead-contaminated dust.
2. **Perform visual examinations for deteriorating paint** (unless the paint is found not to be LBP):
 - At unit turnover; and
 - Every 12 months (unless the tenant refuses entry).
3. **Promptly and safely repair deteriorated paint and the cause of the deterioration.** If more than a *de minimis* amount of paint (for example, more than one square foot per room) has deteriorated (unless the paint is found not to be LBP):
 - Make the surface intact by paint stabilization, enclosure, encapsulation, or removal.
 - Follow Essential Maintenance Practice #1 (above) when repairing the surface.
 - Diagnose and correct any physical conditions causing the paint deterioration (for example, structural and moisture problems causing substrate failure or conditions causing painted surfaces to be crushed).
 - When there is extensive paint deterioration (for example, more than five square feet per room), the procedures for dust testing after Standard Treatments apply.
4. **Provide generic LBP hazard information to tenants per Title X** including the EPA-developed educational pamphlet and any information available about LBP or LBP hazards specific to the unit.
5. **Post written notice to tenants** asking tenants to report deteriorating paint and informing them whom to contact. Promptly respond to tenants' reports and correct deteriorating paint, with accelerated response in units occupied by a child under age six or a pregnant woman — and in no case longer than 30 days. Do not retaliate against tenants who report deteriorating paint.
6. **Train maintenance staff.** At a minimum, maintenance supervisors need to complete a one-day training course based on the HUD/EPA operations and maintenance/interim control activities curriculum. The maintenance supervisor must ensure that workers either take the one-day training course or have a clear understanding of LBP hazards, unsafe practices, occupant protection, and dust cleanup methods by such means as on-the-job training and video instruction. The maintenance supervisor needs to provide adequate oversight of workers who have not taken the training course.

Actions in Response to Notification of an EBL Child

1. **Cooperate with local public health (or housing department) authorities** investigating the child's case by:
 - Responding promptly to requests from local officials for information necessary to complete an environmental investigation;
 - Providing local public health officials access to the unit and property for purposes of performing any environmental investigation; and
 - Implementing lead hazard control measures directed by the agency.
2. **Obtain a risk assessment** by an independent certified risk assessor for the unit in which the EBL child resides, except in either of the following cases:
 - The local health department (or other local agency) has already conducted an environmental investigation and the property owner has responded to any health department directives to control hazards in the unit; or
 - The property is already covered by valid documentation of compliance by an independent, certified individual. In this case, all responsibility for hazard evaluation rests with the local government. (Note: Failure to promptly respond to notification of more than a *de minimis* amount of deteriorating paint invalidates such documentation of compliance.)
3. **Control all LBP hazards** identified by the risk assessor (or local agency official) within 15 days, and conduct post intervention dust tests. Where there is evidence of chewing, the control action should provide permanent protection, (for example, permanent covering or replacement of a window sill). If no LBP hazards are identified, the source of exposure is presumed to be other than the housing unit and no further action is required by the property owner.
4. **Notify affected tenants of risk assessment results and any hazard control actions taken.**
5. **Do not retaliate against tenants in response to the identification of an EBL child.**
6. **Relocate tenant if LBP Hazards are not promptly controlled.** If any identified LBP hazard is not promptly controlled, the property owner shall pay to relocate the tenant to a unit of comparable quality, size, location, and rent that does not contain LBP hazards. In such cases, the vacated unit shall not be rented to a new tenant until the LBP hazards have been controlled and the unit has passed independent dust tests — unless the unit is located in a property where a Lead Hazard Control Plan is being implemented (see Exhibit 3-5).

research project is under way to determine whether particular remodeling and renovation activities create lead-based paint hazards and require additional safeguards. Finally, it should be noted that Essential Maintenance Practices do not guarantee the absence of lead-

based paint hazards or qualify the owner for any liability limitation.

Property Owner Response to an EBL Child

In some communities, health departments conduct

environmental investigations for EBL children, which examine a variety of possible sources of lead exposure in addition to the housing unit. In other communities, health departments make no response to EBL children whatsoever. To ensure prompt action to prevent these most vulnerable children from being further exposed to lead, the Task Force has concluded that these standards of hazard control also need to address property owners' responsibilities in the case of an EBL child. When a property owner receives written notice that a child under age six who has been living in the unit for more than 30 days has an elevated blood lead level (defined as the CDC threshold for environmental investigation—currently one test at or above 20 µg/dl or two consecutive tests at or above 15 µg/dl), the standards in Exhibit 3-3 apply.

Control Any Lead-Based Paint Hazards Identified

In addition to Essential Maintenance Practices and responding to an EBL child, owners of pre-1978 non-exempt units have a responsibility to correct any lead-based paint hazard identified by a certified risk assessor or inspector or by the staff of a responsible local agency. The Task Force acknowledges that lead-based paint hazards will rarely be identified absent a risk assessment or an EBL child. Nonetheless, confirmation of the existence of a lead-based paint hazard by a certified professional or local official requires action regardless of a unit's presumptive risk classification (see Exhibit 3-4).

Recommendation 3-1:

Standards for Pre-1978 Rental Housing. The Task Force recommends that the following three lead-based paint maintenance and hazard control standards apply to pre-1978 rental units (unless a lead-based paint inspection has found no lead-based paint):

- *Essential Maintenance Practices (Exhibit 3-2);*
- *Actions in response to notification of an EBL child (Exhibit 3-3); and*
- *Control of identified lead-based paint hazards (Exhibit 3-4).*

3.5 DEFINING HIGHER PRIORITY HOUSING

UNITS

Recognizing that there is a wide range of hazards in the pre-1978 housing stock, the Task Force believes that it is important to identify units that are likely to pose a high risk of lead hazards. In these units, measures in addition to Essential Maintenance Practices are needed. The Task Force believes that the concept of designating such higher priority units is a valuable strategy that state and local governments should incorporate in lead-based paint maintenance and hazard control standards. Many factors are indicators of the risk of lead hazards, including: age of construction, physical condition, location, occupancy, rent levels, family income, and economic distress. Each of these factors presents advantages and disadvantages, and state and local governments may want to consider available data correlating these factors with lead hazards in setting their own criteria for higher priority units.

Rationale for Defining Pre-1950 Units as Higher Priority Benchmark

Ultimately, the Task Force decided to classify housing units built before 1950 as the benchmark criterion for higher priority status. Construction prior to 1950 was selected for several reasons. First, the year of construction is an objective variable, usually easily established and not subject to judgment, interpretation, or dispute. Second, information from several sources indicates that older units are likely to contain more surfaces painted with lead-based paint, higher concentrations of lead in the paint, more coats of paint, and a higher likelihood of lead-based paint hazards.

- HUD's 1990 national survey of private homes found that pre-1950 units had a higher prevalence of lead-based paint than newer units, more surfaces and components with lead-based paint, and higher concentrations of lead in the paint.
- Data from the Bureau of Mines indicate that approximately 92 percent of the total tonnage of lead carbonate used in paint was used prior to 1950 (and about 97 percent prior to 1960). While the use of smaller amounts of lead com-

Control of Identified LBP Hazards

1. **Timing of Hazard Controls.** The timing of the property owner's action to control an identified LBP hazard varies based on the unit's occupancy. The following schedule applies, unless modified by the responsible local agency (for example, requiring earlier action in situations deemed health emergencies).
 - Interior LBP hazards need to be controlled as soon as possible in units occupied by a family with a child under age six or a pregnant woman or used for regular day care and in no case longer than 30 days.
 - In units not occupied by a child under age six or a pregnant woman or used for regular day care, the property owner may elect to wait until unit turnover (vacancy).
2. **Hazard Control Options.** Generally, the property owner has discretion to control the hazard by either interim controls or abatement (or some combination of strategies). Abatement projects must be performed by a certified contractor, per Title X. Interim controls should be performed by trained work crews. Interim control strategies may not be used on a surface or component if:
 - A risk assessment report disqualifies interim controls as inappropriate;
 - Interim controls on a surface or component have failed twice; or
 - A public agency or court has ordered abatement.
3. **Work Practices.** Avoid unsafe practices and follow the good work practices described in Essential Maintenance Practices (see Exhibit 3-2).
4. **Occupant Protection.** Take precautions to protect occupants and their belongings from lead exposure in the course of hazard control measures in occupied units, including temporary relocation of occupants and their belongings as necessary.
5. **Dust Testing.** Whenever an LBP hazard identified by a certified professional or local official is being controlled, dust tests must be performed at the conclusion of the intervention to verify compliance.

pounds in paint persisted longer for other purposes, such as tinting, lead carbonate accounts for the great mass of lead used in residential paint.

- Preliminary analyses of health data from NHANES III also suggest that age of housing is a significant risk factor, based on responses to a question about the age of the family's dwelling. Children age 1-5 were more than twice as likely to have blood lead levels at or above 10 µg/dl (as well as above 15 µg/dl) in pre-1946 housing than in 1947-1973 units. (1946 and 1973 happened to be the dates the NHANES questionnaire used for housing age categories.)

The Task Force recognizes that not all pre-1950 units have lead hazards—and that not all newer units are

free of hazards. More reliable methods are needed to better target higher priority units both to identify post-1950 units that are higher risk as well as to exempt older units that pose low risks. However, for the reasons cited above, the Task Force concluded that using pre-1950 construction as the national benchmark for higher priority provides a useful basis for making presumptions about risk, setting initial priorities, and allocating resources. Of course, any presumption of a unit's or property's risk status is superseded by unit-specific data, if and when such data become available.

Factors State and Local Governments Should Consider in Defining Higher Priority Units

The Task Force's classification of pre-1950 units as higher priority is intended to serve as a national benchmark. As state and local governments establish standards for hazard control, the Task Force recommends that they consider this pre-1950 benchmark for higher priority units as well as modifications based on objective local data, such as housing age and condition, lead poisoning prevalence rates, and demographic factors. The Task Force emphasizes the importance of this higher priority designation: an overly narrow definition will miss units with uncontrolled lead hazards, leaving children exposed; an overly broad definition will unnecessarily impose the requirements and expense of additional hazard control measures in lower risk units for which Essential Maintenance Practices would have sufficed.

The Task Force offers the following discussion of possible factors for defining higher priority units to help guide state and local governments' deliberations. While many factors correlate with a higher risk of lead hazards, some work better than others as criteria for defining higher priority units as discussed below.

- **Caution Against Using Units with an EBL Child.** While the presence of an EBL child is a strong indicator of lead hazards, the Task Force believes that basing priority on the presence of an EBL child is inappropriate and antithetical to a prevention-based system. The purpose of defining standards of hazard control is to protect children from hazards before they are poisoned—and to make clear to property owners the measures needed to protect occupants (and thereby avoid liability).
- **Blood Lead Screening Data.** If a community has adequate blood lead screening data, this may provide a useful means for identifying high-risk neighborhoods or census tracts for a geographically-based system for defining higher priority units. This approach is only an option in those communities with blood lead screening that is adequate to identify concentrations of children with blood

lead levels at or above the Centers for Disease Control's 10 µg/dl level of concern. However, care should be taken that defining higher priority areas geographically does not create redlining problems by making lenders, insurers, and prospective purchasers wary of doing business in neighborhoods or communities defined as having higher priority lead problems.

- **Dilapidated Unit Condition and Neighborhood Blight.** Unit condition is another variable linked to the likelihood of lead hazards—and the combination of poor physical condition and pre-1950 construction is probably a strong predictor of risk. However, using unit condition as a trigger for regulatory standards requires a system for judging units fairly and classifying units discretely. Communities that already collect data to classify units based on condition or define blighted neighborhoods might find these factors useful. Again, care should be taken to avoid redlining by insurers, lenders, and prospective purchasers.
- **Different Age-of-Construction Threshold.** In some states or localities, an earlier or later construction age cut-off may be more appropriate than pre-1950. For example, an earlier cut-off may be appropriate where restrictions on the use of lead-based paint were put in place earlier or where there is evidence that older (for example, pre-1930 or pre-1940) units have more surfaces with lead-based paint and/or higher concentrations of lead.
- **Presence of a Young Child.** Because only about one of every five households contains a child under age six, using the presence of a young child as a trigger for additional control measures offers another approach to setting priorities and targeting action. However, this approach is at odds with these standards' emphasis on unit turnover as an opportunity for conducting hazard evaluation/control (since the property owner typically lacks prior information about the incoming occupants). In addition, hinging additional requirements for hazard control on the presence of a child both

encourages discrimination against families and overlooks the high rates of mobility among these households.

- **Poverty and Economic Distress.** While low family income and low unit rent correlate with lead poisoning risks, using these factors as criteria to define higher priority units would discourage owners from renting to poor families because of the additional hazard control requirements that would be triggered. (Chapter 4 recommends several strategies designed especially for economically distressed units, and Chapter 5 emphasizes the necessity of additional public subsidies targeted to low-income families living in economically distressed units.)

Recommendation 3-2:

Defining Higher Priority Units. The Task Force recommends that pre-1950 housing be defined as the national benchmark for higher priority units and that state and local governments consider appropriate modifications based on factors including but not limited to age of the housing stock and location-based factors such as housing dilapidation or, where adequate blood lead screening data are available, above-average rates of EBL children.

3.6 ADDITIONAL HAZARD CONTROL STANDARDS FOR OWNERS OF HIGHER PRIORITY RENTAL UNITS

In addition to implementing Essential Maintenance Practices and responding to notification of an EBL child or an identified lead-based paint hazard, additional lead-based paint hazard control standards apply to higher priority units (for example, pre-1950 rental units based on these benchmark standards). Owners of higher priority units select one of the following approaches:

- Perform a risk assessment and control all lead-based paint hazards identified or (for owners of

multifamily properties or multiple units) implement a Lead Hazard Control Plan (see Section 3.7); or

- Regularly perform Standard Treatments as described in Section 3.8.

The Choice Between Standard Treatments and the Risk Assessment Approach

The Task Force concluded that the decision about which approach to take should generally be left to the property owner. In some cases, Standard Treatments will be more appropriate, while in others the risk assessment/hazard control approach will be preferable. Standard Treatments offer the advantage of devoting resources directly to hazard control—and their cost may be minimal for units in good condition. Standard Treatments can be performed by in-house maintenance staff who have sufficient knowledge of lead-based paint hazards.

On the other hand, a risk assessment (performed by an independent, certified risk assessor) may document that no lead-based paint hazards are present, obviating completely the need for expenditures on control actions. Similarly, if a risk assessment identifies only one or limited lead-based paint hazards, the cost of targeted control measures may be less than Standard Treatments. In multifamily properties, addressing lead hazards on a property-wide basis under a Lead Hazard Control Plan may be more efficient and provide earlier protection to families with a young child than Standard Treatments. In addition, documentation of compliance provided by an independent, certified risk assessor may assist owners in obtaining affordable liability insurance or qualifying for limitations in legal liability (see Chapter 6).

Unit-Specific Data Supersede Presumptions of Risk

Higher priority units are presumed to pose higher risks of lead-based paint hazards until a risk assessment or inspection is conducted. As unit-specific data become available, this presumption of risk status is superseded. If a risk assessor identifies a lead-based paint hazard in any unit, it is the property owner's responsibility to

control the hazard (see Exhibit 3-4). If a risk assessor finds no lead-based paint hazards in a unit classified as higher priority on two consecutive evaluations (risk assessment, hazard screen, or reevaluation), the unit is no longer considered to be higher priority. Owners with documentation of two consecutive passes then need only conduct Essential Maintenance Practices and respond to notification of an EBL child or an identified lead-based paint hazard.

The unit would then again become subject to the additional lead-based paint hazard control standards applicable to higher priority units upon:

- Failure to perform Essential Maintenance Practices,
- Failure to respond to an EBL child,
- The identification of a lead-based paint hazard, or
- Sale of the property to a new owner.

As previously noted, owners of all pre-1978 units have the option of having a lead-based paint inspection performed by an independent, licensed inspector. If the lead-based paint inspection finds that the property does not contain lead-based paint or has had all lead-based paint abated, the property is exempt from these lead-based paint standards entirely.

3.7 RISK ASSESSMENT/HAZARD CONTROL OPTION

One option that owners of higher priority units have is to implement the risk assessment/hazard control approach described below. Many property owners find that conducting a risk assessment works to their advantage for the following reasons:

- If a risk assessment identifies no or only limited lead-based paint hazards, the combined cost of the evaluation and required hazard controls may be less than the cost of performing Standard Treatments.
- In multifamily properties (or in similar units under the same ownership), addressing lead haz-

ards on a property-wide basis under a Lead Hazard Control Plan may be more efficient and provide earlier protection to families with a young child than Standard Treatments.

- An independent risk assessor's documentation of compliance with established standards (as of the date performed) may assist the property owner in securing affordable liability insurance and qualifying for liability limitations.
- If a unit passes two consecutive evaluations (risk assessment, lead hazard screen, or reevaluation), its presumptive higher priority classification is superseded. If, in the future, the owner fails to perform Essential Maintenance Practices or to respond to notification of an EBL child or an identified lead-based paint hazard, the unit would revert to the higher priority classification and be subject to the additional hazard control standards. (Note that property owners must maintain valid documentation of compliance from an independent certified individual to qualify for any liability limitation.)

Risk Assessments

Property owners that elect to take this option may perform either a full risk assessment or, if the property is in good condition, a lead hazard screen. A full risk assessment includes a visual examination for deteriorating paint (as well as substrate, structural, and moisture problems that threaten the paint's integrity) and environmental samples of lead in dust and bare residential soil. A lead hazard screen is an abbreviated risk assessment that employs fewer dust samples but more stringent dust standards and costs less to perform than a full risk assessment. Owners of units that have physical deficiencies are likely to find that simply performing a full risk assessment is more cost effective than a lead hazard screen. The use of stricter dust standards in the lead hazard screen increases the likelihood that units with deficiencies will not pass the screen. Units that fail the screen need to have further evaluation work performed to identify the nature and location of hazards in the unit. Lead hazard screens offer a less

expensive option to demonstrate that lead hazards do not exist in units in good condition.

Only risk assessors trained based on an EPA-developed training course and certified by state programs approved by EPA can perform these evaluations. The presence or absence of lead-based paint hazards is determined based on criteria established by EPA. EPA has issued guidance regarding the presence of lead hazards pending promulgation of regulations pursuant to Section 403 of Title X. In multifamily buildings, the risk assessor may sample a subset of units in accordance with the criteria set forth by HUD and EPA.

If no lead-based paint hazards are found, the risk assessor provides the property owner written documentation of compliance. If one or more lead-based paint hazards are identified by a risk assessor, owners of multifamily buildings (and multiple properties) have the option of controlling all lead-based paint hazards identified or implementing a Lead Hazard Control Plan.

Controlling All Lead-Based Paint Hazards Identified by the Risk Assessor

If a risk assessor identifies one or more lead-based paint hazards, it is the property owner's responsibility to undertake hazard controls. The property owner may either control all identified lead-based paint hazards based on the standards (Exhibit 3-4) or implement a Lead Hazard Control Plan (Exhibit 3-5).

Once identified lead-based paint hazards have been properly controlled, the property owner should receive documentation of compliance from the risk assessor or inspector. If all lead-based paint has been abated, the unit is exempt from these standards entirely. If all lead-based paint *hazards* have been abated, the unit is subject only to Essential Maintenance Practices and responding to notification of an EBL child or an identified lead-based paint hazard.

If any interim control strategies are used to control an identified hazard, the property owner is responsible for conducting ongoing monitoring, including updating the risk assessment with a reevaluation. A unit that passes twice consecutively is no longer deemed higher priority and is subject only to Essential

Maintenance Practices and responding to notification of an EBL child or an identified lead-based paint hazard. (Note that valid documentation of compliance must be maintained to qualify property owners for any liability limitations.)

If a risk assessment samples only a subset of units in a multifamily property (or similar units under the same ownership), the components and surfaces in which lead-based paint hazards were identified need to be controlled in all units, unless the property owner implements a Lead Hazard Control Plan.

Lead Hazard Control Plan Option

The Lead Hazard Control Plan takes a strategic, property-wide approach to addressing lead-based paint hazards, taking advantage of the flexibility that multifamily buildings (and multiproperty portfolios) provide in protecting children from lead hazards. The objective of a Lead Hazard Control Plan is to provide as much or more protection for young children from lead hazards than Standard Treatments or the unit-by-unit approach to risk assessment/hazard control, while giving the owner additional flexibility. The key elements of a Lead Hazard Control Plan are outlined in Exhibit 3-5. Section 3.9 provides illustrative cost estimates for different types of properties.

Rather than evaluating lead-based paint hazards on a unit-by-unit basis and controlling all lead-based paint hazards identified, a Lead Hazard Control Plan provides flexibility in providing protection from lead-based paint hazards, including reliance on mobility and matching strategies. For example, if agreeable to both the tenant and the property owner, a family with a young child could relocate to a hazard-controlled unit to avoid the expense (and potential risk) involved in protecting occupants and their belongings during hazard control work in an occupied unit.

A Lead Hazard Control Plan is developed by a certified risk assessor who is independent of the prop-

Implementation of a Lead Hazard Control Plan

1. **Commitment to implement Essential Maintenance Practices** (see Exhibit 3-2), and to respond both to the presence of an EBL child (see Exhibit 3-3) and control of identified LBP hazards (see Exhibit 3-4).
2. **Strategy for addressing LBP hazards in units with a young child or a pregnant woman.** The plan shall establish a schedule for accelerated action to address LBP hazards in units occupied by families with a child under the age of six or a pregnant woman or units regularly used for child care.
3. **Protocol for maintenance and cleaning of units at turnover.** The plan shall establish the procedures to be used at unit turnover, such as specialized cleaning designed to remove lead-contaminated dust.
4. **Commitment to evaluate/control LBP hazards in a percentage of units on an expedited schedule.** The plan shall include a written commitment by the owner to make a percentage of units in the property safe from LBP hazards within a specified time period and to give preference to families with young children when leasing these units. In the Lead Hazard Control Plan, the owner would commit to:
 - Conducting LBP hazard evaluation/control in a specified percentage of the units in a building based on the building's historical share of units occupied by families with a young child;
 - Taking appropriate steps to inform families with a young child of the availability of hazard-controlled units (for example, participating in a local registry, as described in Chapter 7);
 - Matching families with a young child to available hazard-controlled units; and
 - Conducting LBP hazard evaluation/controls in additional units if the demand for these units by families with young children exceeds the historical percentage.
5. **Provisions for addressing LBP hazards in common areas of the property.** The plan shall include a strategy for lead hazard control in common areas and other occupied units based on the results of the risk assessor's report.
6. **Ongoing monitoring schedule.** The plan shall include a schedule for ongoing monitoring by an independent, certified risk assessor, including periodic sampling of lead dust levels to ensure that the property owner is complying with the Lead Hazard Control Plan.

erty owner. In developing the Lead Hazard Control Plan, the risk assessor should consult with the property owner to gain insights about the property to determine which strategies will be most appropriate. This consultation allows Lead Hazard Control Plans to combine the risk assessor's knowledge of lead-based paint hazards with the property owner/manager's knowledge of the particular property (for example, its maintenance history, persistent problems, occupancy

profile, and capital improvement program). Property owners who elect to implement a Lead Hazard Control Plan should acknowledge receipt of the plan and commit in writing to its implementation. Property owners who implement Lead Hazard Control Plans may qualify for liability limitation.

3.8 STANDARD TREATMENTS

As an alternative to performing a risk assessment and controlling identified hazards, property owners may opt to perform Standard Treatments. Standard Treatments are routine procedures aimed at controlling lead hazards that can be preformed by a trained maintenance crew who have sufficient knowledge of lead-based paint hazards, (as prescribed in Exhibit 3-2). Standard Treatments are conducted by owners of higher priority rental units as outlined below:

- At each unit turnover, unless such treatments were performed in the unit within the past 12 months;
- In occupied units that have remained continuously occupied for 18 months by a family with a child under age six (of which the property owner has knowledge); and
- In occupied units when the amount of deteriorating paint is extensive (for example, more than five square feet per room).

Because conducting Standard Treatments in vacant units is more straightforward and effective (avoiding obstacles presented by furniture and the need to protect occupants and belongings), these standards emphasize unit turnover as the primary trigger for action. At the same time, the Task Force felt that potential hazards to young children in units that do not turn over cannot be ignored. If agreeable to both the tenant and the owner, a family with a young child could move to a comparable unit that has been treated and has passed dust tests to avoid the need for conducting Standard Treatments in an occupied unit. Property owners are encouraged to consider this approach and offer this option to families when comparable units acceptable to the tenant are available.

Exhibit 3-6 outlines the Standard Treatments to be performed in both vacant and occupied units, explaining the objective of each treatment and providing examples of each. Section 3.9 provides illustrative cost estimates for Standard Treatments and other measures in different kinds of properties.

Once Standard Treatments have been performed in a unit, subsequent treatments will primarily involve

maintaining the initial work. It should be noted that the Task Force has deferred making any recommendations on the treatment of three components of concern: lead-contaminated wall-to-wall carpeting, interior window sills with intact paint, and windows with intact lead-painted components. While there is evidence that these components may create exposure to lead, additional information is needed to characterize the extent of lead dust hazards, especially given the potentially high cost of treating these components. Any hazards presented by these components should be properly controlled. This is a subject of ongoing research.

Dust Testing After Standard Treatments

The purpose of specialized cleaning is to remove lead dust hazards. The only way to confirm that specialized cleaning has been effective is by dust testing. The extent of dust testing called for by these benchmark standards depends on the situation, as outlined below:

- When Standard Treatments are performed in a unit occupied by a family with a child under age six or a pregnant woman and disturb more than a de minimis amount of paint, dust tests are needed in the work area. (Activities that disturb or stabilize lead-based paint in a unit occupied by a young child are among the most dangerous, justifying dust tests in each unit.)
- When Standard Treatments are conducted at unit turnover, property owners need to conduct sufficient dust testing to provide a reasonable assurance of compliance, as discussed below.

The amount of dust testing needed to provide a reasonable assurance of compliance is a function of four factors: 1) the amount of dust prevalent in the housing stock—the “before” condition; 2) the amount of dust generated by the Standard Treatment work; 3) the proficiency of the cleaning crew; and 4) the

Standard Treatments

1. **Safely repair deteriorated paint.** The standards set forth in Exhibit 3-2 apply. (Note that the safe repair of deteriorating paint should have already been done under Essential Maintenance Practices. The same procedures apply to stabilizing deteriorated paint identified in the course of Standard Treatments.)
2. **Provide smooth and cleanable horizontal surfaces.** Rough, pitted, and porous surfaces trap lead dust and make it difficult to thoroughly clean these surfaces. Smooth horizontal surfaces will make it possible for tenants' regular housekeeping to reduce exposure to lead dust (for example, recoating hardwood floors with polyurethane, replacing or recovering worn out linoleum floors, treating interior window sills). During treatment of an occupied unit, occupants and their possessions must be protected from lead exposure, but only surfaces that are accessible need to be treated.
3. **Correct conditions in which painted surfaces are rubbing, binding, or being crushed that can produce lead dust (unless the paint is found not to be LBP).** Owners shall correct conditions that cause rubbing, binding, or crushing of painted surfaces to protect the integrity of the paint and reduce the generation of lead dust (for example, rehanging binding doors, installing door stops to prevent doors from damaging painted surfaces, reworking windows).
4. **Cover or restrict access to bare residential soil (unless it is found not to be lead-contaminated).** Under Title X, only bare soil that is lead-contaminated is defined as a hazard. Owners shall visually check for bare soil when performing treatments on a unit and implement controls to prevent occupant exposure (for example, covering bare soil with gravel, mulch, or sod; physically restricting access to bare soil). In most cases, covering bare soil is an effective control.
5. **Specialized cleaning.** Lead-contaminated dust, the foremost path of childhood poisonings, may not be visible to the naked eye and is difficult to clean up. Owners shall conduct specialized cleaning of work areas upon completion of the treatments above. During treatment of an occupied unit, only surfaces that are accessible need to be cleaned.
6. **Perform sufficient dust tests to ensure safety.** When performing Standard Treatments in vacant units, sufficient dust tests are needed following treatment to provide a reasonable assurance of compliance (as discussed in Section 3.8). Dust tests of the work area are to be performed after completion of Standard Treatments in any unit occupied by a family with a child under age six or a pregnant woman if more than a *de minimis* amount of paint is disturbed.

methodology used for sampling. The amount of dust prevalent in housing differs from unit to unit and from community to community, as exterior bare soil and street dust can contribute to indoor dust levels as

well as interior paint. The amount of dust generated during Standard Treatments can also vary widely, depending on how much lead-based paint is deteriorating or disturbed. The significance of the cleaning crew's proficiency cannot be overemphasized, as anecdotal reports from public housing indicate that trained

cleaning crews often experience high failure rates until they gain experience. Finally, the methodology used for sampling lead dust is critically important.

Protocols for dust sampling (as well as for lead-based paint inspections, risk assessments, and lead hazard screens) are established by HUD and EPA guidelines and regulations. The number of dust samples (and hence the cost) are a function of the number of samples taken in each unit and, in the case of multi-family properties, the number of units sampled in the development. Because the cost of dust testing (and other evaluation tools) will ultimately determine how widely they are used in private housing, the Task Force cautions HUD, EPA, and states against setting excessive requirements. Sampling protocols should allow for composite sampling where appropriate and should continually be updated to incorporate new research findings and advances in technology. As detailed in Chapter 11, the Task Force is convinced that investments in research to reduce evaluation costs will pay large dividends. The Task Force emphasizes to EPA, HUD, and states that the goal of all evaluation protocols must be the minimum sampling needed to support sound decision making. Policymakers must recognize that the pursuit of statistical confidence must be weighed against the reality that the cost of these evaluation tools will determine whether they become widely used in private housing.

Initially, property owners need to conduct dust tests after Standard Treatments in each unit to ensure the effectiveness of cleaning protocols and the proficiency of cleaning crews. Once established cleaning crews have demonstrated proficiency and reliability in meeting lead dust clearance standards (for example, passing ten units consecutively), property owners may elect to rely on random checks to monitor compliance. In neighborhoods where high interior lead dust levels are prevalent or in cases in which the Standard Treatments involve extensive paint deterioration or disturbance, property owners should conduct enough dust tests to give themselves confidence that specialized cleaning has been successful.

Property owners have the option of conducting dust tests themselves (with proper training, of course) or having an independent certified risk assessor or inspector do the testing. Self-testing is clearly less expensive, but of less value to owners interested in securing liability insurance or limitations in liability. As discussed in Chapter 6, the Task Force recommends that states limit the admissibility of dust test results to those performed by a certified risk assessor or lead-based paint inspector and also recommends that liability limitations be available only to owners who obtain documentation of compliance from a certified risk assessor or inspector.

Recommendation 3-3:

Establishing Additional Standards for Higher Priority Housing. The Task Force recommends that lead-based paint hazard control standards for higher priority units require either:

- *Risk assessment/hazard control*
 - *Control of identified lead-based paint hazards (Exhibit 3-4); or*
 - *Implementation of a Lead Hazard Control Plan (Exhibit 3-5); or*
- *Standard Treatments (Exhibit 3-6).*

3.9 ESTIMATED INCREMENTAL COSTS OF BENCHMARK STANDARDS

This section presents initial estimates of the cost of implementing key elements of the Task Force's benchmark standards for lead-based paint maintenance and hazard control to help provide a better understanding of the anticipated cost to property owners. To help reduce the cost of compliance, the Task Force designed the benchmark standards to build on regular maintenance and repair activities and to take maximum advantage of the opportunity to perform hazard control work at unit turnover. The cost estimates presented in this section address the incremental cost to prop-

erty owners of complying with the standards beyond regular maintenance activities.

The estimates presented in this section are based on data about current costs for comparable activities and are presented for illustration only. To develop these estimates, arbitrary assumptions had to be made about a number of factors, such as unit size, unit turnover rates, the extent of LBP hazards, and other property characteristics. Because these factors directly affect the cost of complying with the standards, the actual cost to a property will vary according to its specific characteristics.

The estimates were developed from information provided by lead-based paint hazard evaluation/control professionals and property owners, including members of the Task Force, and rely heavily on data from limited geographic areas (primarily Maryland and Georgia). As a result, the costs in a particular geographic area may vary from the estimates presented here due to differences in local market conditions. Also, many of the costs can be expected to decline, sometimes significantly, in response to advances in knowledge and technology, and as competition in the marketplace increases. The Task Force consciously attempted to structure the standards in ways that would minimize the need for highly specialized contractors. By making it possible for property owners and existing firms in the housing industry to perform many of the required activities, the Task Force expects that the standards will encourage innovation and exert a downward pressure on prices.

It is impossible to develop a single estimate of the compliance cost that covers most properties because the actual cost for a property depends on property-specific factors (for example, physical condition, size of property, the nature and extent of lead hazards), as well as the approach the owner decides to take in meeting the standards. For example, owners of higher priority properties may choose either to conduct Standard Treatments or to implement the risk assessment/hazard control approach which, in multifamily properties, includes the option of following a Lead Hazard Control Plan. Therefore, the Task Force decided that the most useful approach would be to estimate the

overall incremental cost to comply with the benchmark standards for several sample higher priority and lower priority rental properties to provide a rough indication of the magnitude of these costs and to highlight factors that significantly affect costs.

The benchmark standards and the cost estimates presented in this section presume that property owners are maintaining units in adequate physical condition because rental property owners have a legal obligation to provide suitable housing that is maintained in accordance with local housing codes and standards. At the same time, the Task Force recognizes that, for some properties, repairs are needed to correct physical deficiencies due to deferred maintenance. The repairs to correct these deficiencies have *not* been included in the estimates presented in this section because this work is an existing responsibility of rental property owners. Among properties in poor physical condition, the cost of these repairs may significantly exceed the estimated costs of complying with the benchmark standards. When implementing the benchmark standards, states, local governments, and others need to keep in mind that some property owners, particularly those with older, substandard buildings, will face costs beyond the incremental costs discussed in this section as they work to bring their properties into compliance with the standards.

The organization of this section parallels the presentation of the standards in Exhibit 3-1, which illustrates the different approaches property owners can use to comply with the benchmark standards. The first section discusses the cost of lead-based paint inspections because having an inspection performed is an option available to all owners of pre-1978 units. The next section examines the incremental cost of the benchmark standards that apply to lower priority properties, followed by estimates of the cost of standards that apply to higher priority properties. For a more detailed description of the assumptions underlying the estimates presented for the sample properties

Exhibit 3-7

Estimated LBP Inspection Costs

	No. of Units Inspected	Cost Per Unit Inspected	Total Cost	Overall Cost Per Unit ^c
Sample Single Unit Property	1	\$400	\$400	\$400
Sample 50-Unit Property				
FHA Inspection Protocol ^a	10	\$300	\$3,000	\$60
Alternate Protocol ^b	31	\$300	\$9,300	\$186
Sample 200-Unit Property				
FHA Inspection Protocol ^a	10	\$300	\$3,000	\$15
Alternate Protocol ^b	51	\$300	\$15,300	\$77

NOTES:

- a Unit sampling requirements based on the current inspection protocol for FHA-insured properties.
- b Unit sampling requirements based on an inspection protocol designed to achieve statistically reliable results with a 95 percent confidence level, assuming that lead-based paint is randomly distributed.
- c Total cost of the inspection divided by the number of units in the property.

discussed below, refer to Appendix B.

Lead-Based Paint Inspection Option

Owners of pre-1978 properties have the option of obtaining a lead-based paint inspection by a certified inspector to determine if the property contains lead-based paint. If an inspection shows that a property contains no lead-based paint, the property is exempt from the standards and no further action is required. If an inspection reveals that a property contains only small amounts of lead-based paint, the owner may decide to abate or perform ongoing controls on only these surfaces at relatively low cost. If an owner abates all lead-based paint, the property will be exempt from the standards, no further action would be required, and no additional cost would be incurred. For some property owners, a lead-based paint inspection may prove to be the most cost-effective option for comply-

ing with the benchmark standards.

Exhibit 3-7 presents estimates of the cost to perform lead-based paint inspections in three sample properties—a single unit property, a 50-unit property, and a 200-unit property. The exhibit shows the number of units tested, the estimated cost per unit tested, the total cost of the inspection, and the overall cost per unit (which reflects the fact that in multifamily properties inspectors only need to test a sample of units). Estimates are provided for two inspection protocols: 1) the current protocol for HUD FHA-insured properties; and 2) an alternate protocol designed to provide statistically reliable results assuming that lead-based paint is randomly distributed in a unit. Because units in multifamily properties often have common painting patterns, it may not be necessary to assume that lead-based paint is randomly distributed. Research is now underway to

determine the variability of the distribution of lead-based paint among units in multifamily buildings.

While the FHA protocol has been in use for several years, it was not designed to provide statistically reliable results. Under the FHA protocol, inspections of multifamily properties with more than 20 units require testing a sample of 10 units per property, regardless of the total number of units. Under a protocol designed to provide statistically reliable results with a 95 percent level of confidence and that assumes a random distribution of lead-based paint, a sample of 31 units would be inspected in a 50-unit property and a sample of 51 units in a 200-unit property.

The figures in the exhibit clearly illustrate the cost sensitivity of decisions regarding unit sampling requirements for lead-based paint inspections. The protocol for lead-based paint inspections must be reliable because the results have significant economic and legal consequences (they may guide lead hazard control activities or may show that a property is free of lead-based paint and, therefore, exempt from the benchmark standards). At the same time, the Task Force urges HUD and EPA to avoid excessive unit sampling requirements for multifamily properties. Increases in unit sampling requirements that provide little or no improvement in the reliability of inspections not only raise the cost of inspections unnecessarily, but also have the effect of discouraging property owners from performing inspections at all.

Incremental Costs to Lower Priority Properties

The overall incremental cost of complying with the elements of the standards that apply to lower priority properties is relatively modest. The principal cost for most of these properties is for Essential Maintenance Practices. For these properties, Essential Maintenance Practices are expected to provide significant protection against the risk of lead hazards and, therefore, will prevent young children from being exposed to lead hazards. Thus, most owners of lower priority properties

that properly perform Essential Maintenance Practices will not incur the costs associated with an EBL child or responding to an identified lead hazard.

To provide a rough indication of the magnitude of the incremental costs for Essential Maintenance Practices and to illustrate how these costs vary for lower priority properties with different characteristics, Exhibit 3-8 summarizes the estimated incremental costs for three sample lower priority properties—a single unit property, a 50-unit property, and a 200-unit property. The table presents the cost for the initial year that the properties are subject to the standards, the ten-year cost, and the average annual cost over ten years. Again, these estimates reflect the incremental cost of the benchmark standards and not the cost of regular maintenance or repairs to correct physical deficiencies. Appendix B provides a more detailed description of the assumptions underlying the estimates shown for these sample properties.

Key Factors Affecting Incremental Costs. The single most sensitive factor affecting the cost of meeting Essential Maintenance Practices is the cost of performing specialized cleaning following repairs that disturb painted surfaces. As defined in Chapter 1, specialized cleaning entails the use of cleaning methods that remove lead dust. The Task Force has not endorsed specific protocols for specialized cleaning, because reliable cost-effective cleaning protocols appropriate to different levels of work in units need to be validated by proper research. Experience in public housing and other units suggests that after abatement projects, a three-step protocol of HEPA vacuum, special wet mopping, and a second HEPA vacuum is effective¹. HUD's new guidelines² call for a two-step protocol (HEPA vacuum and special wet mopping) for dust removal in units with identified lead dust hazards. Preliminary research from Canada indicates that lower cost cleaning methods may also be highly effective in removing lead dust.³ However, research has not been completed to reliably validate the effectiveness of lower cost cleaning methods in different scenarios.

To estimate the cost of Essential Maintenance Practices, the Task Force has developed estimates based

Estimated Incremental Costs for Sample Lower Priority Properties^a

	Total Cost (Initial Year) ^c	Estimated Incremental Costs ^b		
		Total Cost (10 Years) ^d	Average Annual Costs ^e Property	Per Unit
Sample Single Unit Property ^f	\$105-\$145	\$850-\$1,100	\$85-\$110	\$85-\$110
Sample 50-Unit Property ^g	\$3,000-\$4,125	\$28,000-\$39,500	\$2,800-\$4,000	\$55-\$80
Sample 200-Unit Property ^h	\$10,600-\$15,100	\$104,000-\$149,500	\$10,500-\$15,000	\$50-\$75

NOTES:

- a This table presents estimates of the cost to comply with the benchmark standards for lower priority properties using the three sample properties described in Appendix B. These estimates are presented only to provide readers with an initial understanding of the magnitude of the costs to individual properties and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- b *Estimated Incremental Costs.* The cost of activities required under the benchmark standards that a property owner is not already expected to perform. The estimates show the incremental cost of Essential Maintenance Practices under the two specialized cleaning protocols described in Scenarios A and B (see below). The lower figures are the estimated incremental costs of Essential Maintenance Practices for the sample properties under Scenario B. The higher figures show the estimated incremental cost under Scenario A.
- c *Initial Year.* The incremental cost of the activity for the first year that the property is subject to the benchmark standards.
- d *10 Years.* The total cost to the property of performing the required activities (in 1995 dollars) over a ten-year period.
- e *Average Annual Costs.* The total cost (in 1995 dollars) over ten years divided by ten.
- f *Sample Single Unit Property.* The assumptions and calculations used to prepare the estimates for this sample single unit property are presented in Exhibit B-2 of Appendix B.
- g *Sample 50-Unit Property.* The assumptions and calculations used to prepare the estimates for this sample 50-unit property are presented in Exhibit B-3 of Appendix B.
- h *Sample 200-Unit Property.* The assumptions and calculations used to prepare these estimates for this sample 200-unit property are presented in Exhibit B-4 of Appendix B.

on two scenarios for specialized cleaning at routine unit turnovers.

- **Scenario A:** Essential Maintenance Practices require specialized cleaning of the work area when painted surfaces are disturbed or deteriorated paint is repaired. Because routine work at unit turnover will not require paint repairs in every room of every unit and not every unit will be completely repainted at every unit turnover, this scenario assumes that, on average, specialized cleaning of one-third of a unit's square footage is performed at unit turnover. This scenario also assumes the use of a two-step specialized cleaning protocol (one HEPA vacuum and one wet wash
- **Scenario B:** Alternatively, if the effectiveness of regular vacuuming and one wet mop with a specialized cleaner (the protocol evaluated in the Canadian Study) is proven to be effective in removing lead dust, then the incremental cost of specialized cleaning under Essential Maintenance Practices would be very low—roughly \$0.05 per square foot. This scenario assumes that this type of low-cost specialized cleaning protocol is substituted for conventional cleaning methods at unit turnover and that the entire unit is cleaned. The

with a lead-specific detergent) at an average incremental cost of \$0.30 per square foot.

reduced cleaning cost under this type of protocol makes it possible to clean the *entire* unit and still achieve important cost savings (approximately 50 percent) compared with Scenario A.

It should be noted that many owners are currently paying higher amounts for cleaning, including owners of units being evaluated in the HUD grants program (sometimes as high as \$0.70 per square foot). The estimates used in these calculations are believed to be reasonable for the scenarios described, recognizing that low barriers to entry and low capital requirements to perform specialized cleaning services should result in highly competitive prices. Research studies are needed to determine exactly what cleaning protocols are needed in conjunction with the different types of work performed in a unit, and to validate cost-effective cleaning techniques. The Task Force stresses the importance of accelerated federally-supported research on this issue in Chapter 11.

A second key factor affecting the incremental cost of complying with Essential Maintenance Practices is the frequency of unit turnover. The estimates presented in this section assume an annual unit turnover rate of 50 percent and a complete turnover of all units in multifamily properties within five years. This assumption is based on the average turnover rate for non-elderly, non-federally subsidized, multifamily rental properties. Properties with lower turnover rates will have lower incremental costs, while properties with higher turnover rates will have greater incremental costs.

Incremental Costs to Higher Priority Properties

The estimated incremental costs to comply with the benchmark standards can be substantially greater for higher priority properties, which are subject to further hazard control standards. In addition to Essential Maintenance Practices, owners of higher priority properties need to conduct a risk assessment and control identified lead hazards *or* perform Standard Treatments. Owners of multifamily properties also have the option of following a Lead Hazard Control Plan prepared by a certified risk assessor.

Higher priority properties that do not contain lead hazards will incur only modest costs beyond those

of Essential Maintenance Practices. If an owner opts to have a risk assessment (or lead hazard screen) performed and the property passes the initial evaluation, no additional action beyond Essential Maintenance Practices is needed until a follow-up evaluation is conducted. If the property passes the follow-up evaluation, it is no longer considered higher priority under the benchmark standards, and thereafter only incurs the cost of Essential Maintenance Practices. Exhibit 3-9 presents the estimated incremental costs for three sample higher priority properties—a single unit property, a 50-unit property, and a 200-unit property—that pass an initial and follow-up risk assessment. The table shows that, in multifamily properties, the cost of performing a risk assessment and follow-up evaluation produces only a modest increase over the estimated annual average costs for lower priority units shown in Exhibit 3-8.

In higher priority properties where a risk assessment indicates the presence of lead hazards, or where the property owner opts to perform Standard Treatments, owners will incur additional costs for lead hazard control. Exhibit 3-10 summarizes the estimated incremental costs of the benchmark standards for three sample higher priority properties—a single unit property, a 50-unit property, and a 200-unit property—with modest lead hazards. The table shows the estimated incremental costs under the available options for meeting the requirements for higher priority properties. Of course, properties with more extensive hazards would have higher costs. Appendix B provides a more detailed description of the assumptions underlying the estimates shown for these sample properties.

The estimates for these three sample properties show that the overall incremental costs to higher priority properties will vary depending upon the lead hazard control option selected by the owner. Perhaps the most important variation is the difference between initial cost and total cost over a period of several years. The risk assessment/hazard control option, which involves investing resources for a risk assessment to determine the nature and extent of lead hazards present in the property, typically entails higher initial costs than Stan-

Estimated Total Incremental Costs for Sample Higher Priority Properties that Pass Two Risk Assessments^a

	Total Cost (Initial Year) ^c	Estimated Incremental Costs ^b		Average Annual Costs ^e Per Unit
		Total Cost (10 Years) ^d	Average Annual Costs ^e Property	
Sample Single Unit Property ^f	\$480-\$520	\$1,500-\$1,800	\$150-\$180	\$150-\$180
Sample 50-Unit Property ^g	\$5,600-\$6,700	\$33,000-\$44,200	\$3,300-\$4,400	\$65-\$90
Sample 200-Unit Property ^h	\$15,800-\$20,300	\$113,500-\$159,000	\$11,400-\$15,900	\$55-\$80

NOTES:

- a This table presents estimates of the cost to comply with the benchmark standards for higher priority properties that pass two risk assessments using the three sample properties described in Appendix B. These estimates are presented only to provide readers with an initial understanding of the magnitude of the costs to individual properties and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- b *Estimated Incremental Costs.* The cost of activities required under the benchmark standards that a property owner is not already expected to perform. The estimates show the incremental cost of Essential Maintenance Practices under the two specialized cleaning protocols described in Scenarios A and B (see page 82). The lower figures are the estimated incremental costs of Essential Maintenance Practices for the sample properties under Scenario B. The higher figures show the estimated incremental cost under Scenario A.
- c *Initial Year.* The incremental cost of the activity for the first year that the property is subject to the benchmark standards.
- d *10 Years.* The total cost to the property of performing the required activities (in 1995 dollars) over a ten-year period.
- e *Average Annual Costs.* The total cost over ten years (in 1995 dollars) divided by ten.
- f *Sample Single Unit Property.* Adds the cost of a risk assessment for a single unit (\$375) to the initial year and the cost of a follow-up evaluation in Year 3 (\$300) to the estimated cost of Essential Maintenance Practices for a lower priority property. The assumptions and calculations regarding the estimated incremental cost of Essential Maintenance Practices for this sample property are presented in Exhibit B-2 of Appendix B. For the assumptions about the cost of a risk assessment and follow-up evaluation, see Section B.4 of Appendix B.
- g *Sample 50-Unit Property.* Adds the cost of a risk assessment for a single unit property (\$2,600) to the initial year and the cost of a follow-up evaluation in Year 3 (\$2,100) to the estimated cost of Essential Maintenance Practices for a lower priority property. The assumptions and calculations regarding the estimated incremental cost of Essential Maintenance Practices for this sample property are presented in Exhibit B-3 of Appendix B. For the assumptions about the cost of a risk assessment and follow-up evaluation, see Section B.4 of Appendix B.
- h *Sample 200-Unit Property.* Adds the cost of a risk assessment for a 200-unit property (\$5,200) to the initial year and the cost of a follow-up evaluation in Year 3 (\$4,200) to the estimated cost of Essential Maintenance Practices for a lower priority property. The assumptions and calculations regarding the estimated incremental cost of Essential Maintenance Practices for this sample property are presented in Exhibit B-4 of Appendix B. For the assumptions regarding costs of a risk assessment and follow-up evaluation, see Section B.4 of Appendix B.

dard Treatments. However, over time, risk assessments and Lead Hazard Control Plans are generally more cost-effective because they allow property owners to target their lead hazard control activities. In larger multifamily properties, the ten-year cost of following a Lead Hazard Control Plan is estimated to be signifi-

cantly less than the cost of Standard Treatments. In these properties, the Lead Hazard Control Plan option provides important cost savings over Standard Treatments, particularly when unit turnover rates are high, and when the historical percentage of units occupied by tenants with a young child is low. The benchmark standards give property owners the flexibility to select

Estimated Incremental Costs for Sample Higher Priority Properties^g with Lead Hazards

	Total Cost (Initial Year) ^c	Estimated Incremental Costs ^b		
		Total Cost (10 Years) ^d	Average Annual Costs ^e Property	Per Unit
Sample Single Unit Property^f				
Option #1: Risk Assessment/ Hazard Control	\$1,000	\$2,400-\$2,600	\$240-\$260	\$240-\$260
Option #2: Standard Treatments	\$700	\$3,300	\$330	\$330
Sample 50-Unit Property^g				
Option #1: Risk Assessment/ Hazard Control	\$21,000	\$60,000-\$70,000	\$6,000-\$7,000	\$120-\$140
Option #2: Risk Assessment/ Lead Hazard Control Plan	\$15,500-\$17,000	\$47,500-\$58,000	\$4,700-\$5,800	\$95-\$115
Option #3: Standard Treatments	\$15,500	\$108,000	\$11,000	\$215
Sample 200-Unit Property^h				
Option #1: Risk Assessment/ Hazard Control	\$71,500	\$210,000-\$247,000	\$21,000-\$24,700	\$105-\$125
Option #2: Risk Assessment/ Lead Hazard Control Plan	\$46,500-\$49,000	\$155,000-\$197,000	\$15,500-\$19,700	\$80-\$100
Option #3: Standard Treatments	\$56,000	\$348,000	\$34,800	\$175

NOTES:

- a This table presents estimates of the cost to comply with the benchmark standards for higher priority properties with lead hazards using the three sample properties described in Appendix B. These estimates are presented only to provide readers with an initial understanding of the magnitude of the costs to individual properties and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- b *Estimated Incremental Costs.* The cost of activities required under the benchmark standards that a property owner is not already expected to perform. The estimates show the cost of lead hazard control activities required for higher priority units under the benchmark standards added to the incremental cost of Essential Maintenance Practices under the two specialized cleaning protocols described in Scenarios A and B (see page 82). When two numbers are shown, the lower figures represents the estimated total incremental costs of the standards for the sample properties when Essential Maintenance Practices are performed using the specialized cleaning protocol described under Scenario B. The higher figures show the estimated total incremental cost when Essential Maintenance Practices are performed using the specialized cleaning protocol described under Scenario A. If only one estimate is shown, the total incremental cost to the property is the same regardless of the specialized cleaning protocol used.
- c *Initial Year.* The incremental cost of the activity for the first year that the property is subject to the benchmark standards.
- d *10 Years.* The total cost to the property of performing the required activities (in 1995 dollars) over a ten-year period.
- e *Average Annual Costs.* The total cost (in 1995 dollars) over ten years divided by ten.
- f *Sample Single Unit Property.* The assumptions and calculations used to prepare the estimates for this sample single unit property are presented in Exhibit B-5 of Appendix B.
- g *Sample 50-Unit Property.* The assumptions and calculations used to prepare the estimates for this sample 50-unit property are presented in Exhibit B-6 of Appendix B.
- h *Sample 200-Unit Property.* The assumptions and calculations used to prepare these estimates for this sample 200-unit property are presented in Exhibit B-7 of Appendix B.

the approach most appropriate to the specifics of their situation.

Key Factors Affecting Incremental Costs. The cost of specialized cleaning following lead hazard control work (control of lead hazards identified during a risk assessment or Standard Treatments) is assumed to be higher than the cost under Essential Maintenance Practices because the full unit is assumed to be cleaned following hazard control work or Standard Treatments (rather than just the work area as assumed under Scenario A for Essential Maintenance Practices). Specialized cleaning following lead hazard controls or Standard Treatments is assumed to be performed using the two-step cleaning protocol described in Scenario A with an incremental cost of \$0.30 per square foot.

As with Essential Maintenance Practices, the unit turnover rate is a second factor that significantly affects the estimated costs. Properties that have annual unit turnover rates less than 50 percent will have lower

costs, while those with turnover rates greater than 50 percent will have higher costs.

Finally, in estimating the incremental cost of Standard Treatments, it was assumed that there is no incremental cost for keeping hard-surfaced floors smooth and cleanable because rental property owners in most areas are required by local codes to maintain floors in good condition. In locations where local codes do not require property owners to maintain floors in good condition, the cost of making floors smooth and cleanable would increase the incremental cost of the benchmark standards. Section B.4 of Appendix B includes estimates of the cost to make hard-surfaced floors smooth and cleanable, which range from \$0.40 per square foot to \$2.00 per square foot.

Implementing Lead-Based Paint Standards and Ensuring Owner Compliance

The benchmark standards of lead-based paint maintenance and hazard control recommended by the Task Force in Chapter 3 do not carry the force of law or regulation and will—in and of themselves—do little to clear up the current confusion. To change the behavior of rental property owners and have an impact on insurers and the court system, key actors must recognize and adopt these standards.

Lead-based paint hazard control standards ultimately need to be incorporated into state and local laws and regulations. While the process of changing state and local laws is inevitably protracted, several concurrent actions can help bring these standards into broad acceptance and use, as well as build support for legislative action.

In implementing these standards, state and local governments must be sensitive to several factors. In particular, special approaches and strategies must be developed that recognize the financial realities of economically distressed units as well as the need to protect children's health. In addition, new strategies are needed to ensure owner compliance with established lead-based paint requirements.

This chapter presents the Task Force's recommendations aimed at achieving broad scale implementation of the recommended benchmark lead-based paint maintenance and hazard control standards.

4.1 GAINING BROAD RECOGNITION OF LEAD-BASED PAINT HAZARD CONTROL STANDARDS

The Task Force emphasizes that the recommended benchmark standards are not self-executing and do not have the force of law or regulation. The promise of a more common sense, workable, and protective

approach to controlling lead-based paint hazards in the nation's rental housing stock depends upon the standards becoming broadly recognized and adopted by key parties—federal agencies, state and local legislatures and administrative agencies, primary and secondary lenders, liability insurers, private property owners, and the courts.

Federal Recognition and Support for Lead-Based Paint Standards

While the Task Force anticipates that implementation of lead-based paint maintenance and hazard control standards will occur primarily through laws at the state and local level together with market forces affecting the housing industry, the Federal Government can and should play an important role in facilitating the adoption of the benchmark standards for rental housing.

The Task Force believes that federal leadership is important—indeed, essential—to advance recognition of these standards by states and the private sector. Because the Federal Government actively participates in the housing market, its housing assistance programs can also serve as a model by adopting and applying the benchmark standards. In addition, states, local governments, and private sector parties will be much more likely to establish lead-based paint requirements consistent with the benchmark standards if key federal agencies, such as HUD, EPA, and CDC, endorse these standards and take steps to encourage their adoption. Federal agencies can also make it easier for jurisdictions to incorporate the standards into their laws and regulations by developing model housing codes and lead-based paint requirements that implement the benchmark standards.

The benchmark standards recognize the use of Essential Maintenance Practices, Standard Treatments, and ongoing controls where appropriate, as a cost-effective means to control lead-based paint hazards. Prompt action is needed to increase the number of trained workers who can properly perform these activities so that adequate capacity will exist as the benchmark standards begin to be adopted and property owners seek cost-effective ways to control lead hazards. The operations and maintenance/interim controls training curriculum under development by EPA and HUD will provide a valuable tool for expanding the supply of trained work crews and needs to be released as soon as possible and made broadly available.

The Task Force recognizes that adoption of the lead-based paint standards will take time. While the standards are being implemented, it is likely that unsafe paint removal practices, such as open flame burning and uncontained power sanding, will continue to be used in units with lead-based paint. To prevent the creation of lead-based paint hazards, immediate action by federal agencies is needed to curb the use of unsafe work practices in pre-1978 housing.

Action by federal agencies is important in two other areas to facilitate implementation by private property owners and local governments. First, owners of units that meet established lead-based paint standards will often want independent documentation of compliance. To meet this market demand, risk assessments (and lead hazard screens) will need to document the compliance of units that meet the standards at the time of a hazard evaluation, as well as identifying lead hazards and control options in units that fail. In developing guidelines, regulations, and training courses, HUD and EPA need to address this potential function of risk assessments. Second, health care providers need to complement and support housing-based efforts by conducting blood lead screening of children. In addition to identifying EBL children for early attention, blood lead screening data, where adequate, can help communities set priorities (for example, designating census tracts of higher priority housing based on high prevalence rates).

Recommendation 4-1:

Federal Actions Supporting Adoption of the Benchmark Standards. Federal agencies should recognize and support the adoption of the benchmark lead-based paint hazard control standards for rental housing by taking the following actions:

- *HUD, EPA, and other federal agencies should endorse the benchmark standards and urge that they be implemented by lenders, liability insurers, private organizations and trade associations, state legislatures, local jurisdictions, the courts, and property owners.*
- *HUD should apply these standards in its regulations for federally subsidized programs (with changes as appropriate) and require compliance with the standards for recipients of funding dedicated to provision of affordable housing, as well as to lead-based paint hazard evaluation and control.*
- *HUD should sponsor a project by model code organizations to incorporate these standards into model housing and building codes.*
- *HUD/EPA should take all steps necessary to expedite completion of the operations and maintenance/interim controls one-day training curriculum.*
- *HUD/EPA regulations should prohibit the use of unsafe practices during activities that disturb paint on surfaces likely to contain lead-based paint.*
- *HUD and EPA guidelines, regulations, and training courses for risk assessors and inspectors should address means to document the results of lead hazard evaluations and compliance with established standards.*
- *CDC should sustain and encourage universal blood lead screening to ensure identification, treatment, and lead-based paint hazard control in the homes of at-risk children and to provide reliable data on the prevalence rates of EBL children for state and local governments to use in defining higher priority units.*

Real estate notification and disclosure requirements related to lead-based paint, expected to take effect in 1996, offer an important means of supporting implementation of the benchmark standards. In addition to delivering the EPA pamphlet and providing notification about the presence of lead-based paint or lead-based paint hazards, owners of many rental properties may want to indicate what measures they are taking to protect occupants from lead hazards. Having some mechanism for owners to voluntarily provide standardized information about measures they are taking (such as Essential Maintenance Practices, Standard Treatments, Lead Hazard Control Plan, etc.) would benefit both owners and tenants, as well as advancing the wide adoption of these benchmark standards.

The Task Force also notes that the EPA/HUD proposed regulations on real estate notification and disclosure do not allow an exit for properties that have been inspected and found not to contain lead-based paint. In keeping with the principles embodied in the benchmark standards, the Task Force believes that units and properties that have been found free of lead-based paint by a certified inspector should be exempted from all notification and disclosure requirements. This will provide more efficient use of resources, as well as an incentive for many owners to seek lead-based paint inspections.

Recommendation 4-2:

Revisions to Federal Real Estate Notification and Disclosure Regulations. HUD and EPA should consider changing real estate notification and disclosure requirements for rental housing to:

- ***Provide an opportunity in the disclosure process for property owners to indicate that lead-based paint maintenance and hazard control measures are being followed; and***
- ***Make clear that once a unit or property has been found not to contain lead-based paint by a certified lead-based paint inspector, the requirements for notification and disclosure, including delivery of the EPA pamphlet, no longer apply.***

Adoption of Lead-Based Paint Standards by State and Local Governments

State and local housing codes and public health laws are some of the primary means for protecting the health and safety of rental housing occupants. By amending their laws and regulations in these areas to incorporate the benchmark standards, state and local governments can play a major role in implementing lead-based paint standards for rental housing. As discussed in Chapters 5 and 6, state and local governments can also use the standards as the basis for offering financing assistance and/or liability limitation to rental property owners as incentives to properly address lead-based paint in their properties.

To support the implementation of the benchmark standards, state and local governments need to take several steps to establish comprehensive and effective programs. Programs to accredit lead-based paint training providers and certify risk assessors, inspectors, and abatement contractors are needed to ensure the availability of qualified contractors to perform lead-based paint hazard evaluations and hazard control treatments. State and local governments need to revise laws, regulations, codes, and ordinances to incorporate key elements of the standards for lead-based paint maintenance and hazard control, including standards for lead dust hazards. EPA guidelines are now available on lead dust levels pending the issuance of regulatory standards. In jurisdictions where tenants are not protected against evictions without cause, establishing a rebuttable presumption that evictions within six months of notification of an EBL child are retaliatory will help protect those households from improper evictions. Finally, blood lead screening programs for children and mechanisms for informing property owners of EBL children will help ensure a prompt response when children are poisoned.

Recommendation 4-3:

Creation of Comprehensive Prevention Programs by State and Local Governments. State and local governments should create comprehensive lead poisoning prevention programs by:

- *Incorporating lead-based paint maintenance and hazard control standards into housing codes and health regulations;*
- *Establishing screening programs to identify EBL children, ensuring follow-up housing interventions, protecting families with an EBL child from improper retaliation, and identifying priority areas for prevention efforts; and*
- *Seeking EPA approval of training and certification programs for risk assessors, inspectors, and abatement contractors.*

Private Sector Recognition and Support for Lead-Based Paint Standards

Private sector mechanisms, such as enhancing the availability of property liability insurance and financing for lead-based paint hazard control, are just as important to broad acceptance of these standards. While these benchmark standards offer a framework for reducing the liability exposure of rental property owners, the decision to provide lead-based paint liability coverage rests with insurance companies and requirements set by state insurance commissions. As outlined in Chapter 6, the Task Force believes that insurance companies can use the standards as a basis for offering lead-based paint liability coverage to owners of rental housing. The increased availability of such insurance will establish an important incentive for property owners to follow the standards.

Likewise, the availability of financing for lead-based paint hazard evaluation and control rests, in large part, with private lenders and the secondary mortgage market. As discussed in Chapter 5, the benchmark standards provide a basis for lenders to ensure that lead-based paint hazards have been properly controlled when underwriting financing for pre-1978 housing. By incorporating the benchmark standards into their underwriting, lenders can provide an important incentive for property owners to take action to safely address lead-based paint in their units.

The Task Force is aware that property owners in many older, urban communities are experiencing significant difficulties in securing financing and insurance and is concerned that an emphasis on lead-based paint hazards not be used to justify withholding needed financing and insurance in these areas. The Task Force's recommendations, taken as a whole, are intended to ensure that adequate financing and insurance are available both to remove lead hazards and for properties that do not present such hazards. It would be unfortunate if owners of units defined as higher priority experienced difficulty obtaining financing and insurance solely because the units fall under this classification. At the same time, for both regulatory and credit underwriting reasons, it is difficult for a lender to originate a mortgage on a property that is not in compliance with health and safety laws and regulations. If public subsidies are not available to help economically marginal properties comply with lead hazard control standards, many lenders will be unable to provide private financing.

The Task Force believes that having clearly recognized standards for lead-based paint maintenance and hazard control will relieve rather than exacerbate these problems by providing lenders and insurers with the means to address lead-based paint property by property rather than avoiding neighborhoods where it is prevalent. Having clear standards will help reduce lenders' and insurers' concerns about neighborhoods with lead-based paint by providing clear criteria upon which to base underwriting decisions. It is reasonable for lenders and insurers to expect property owners to comply with the benchmark standards. Conversely, qualified property owners that have complied with lead-based paint standards deserve access to financing and insurance at reasonable terms. (The last section of this chapter discusses more fully the special needs of economically distressed housing.)

Finally, evidence of broad support from private sector entities and public organizations for the benchmark standards will increase the likelihood that key actors, such as jurisdictions, lenders, insurers, and the courts, will recognize and adopt the standards.

Recommendation 4-4:

Recognition of Lead-Based Paint Hazard Control Standards by Private Sector Parties. Lenders, property liability insurers, and other private sector entities should support the adoption of the benchmark hazard control standards and integrate them into their operations.

- *Liability insurers should recognize these standards and integrate them into their underwriting standards. Liability insurance should be provided at affordable rates to property owners who can provide independent verification of compliance.*
- *Both primary and secondary market financial institutions should use adherence to these standards as a factor in providing financing for the purchase and repair of rental housing.*
- *Both lenders and insurers should respect and reinforce the targeting and priorities embodied in the benchmark lead-based paint maintenance and hazard control standards when establishing underwriting requirements.*
- *A broad range of public and private organizations should endorse these standards to accelerate their acceptance by state and local governments, property owners, insurers, and the courts. Examples include the American Society for Testing and Materials (ASTM), housing industry organizations, affordable housing groups and providers, legal organizations, bodies representing states and localities, public health and environmental groups, the lending industry, and the insurance industry.*

Utility of Lead-Based Paint Standards for Rental Property Owners

This section of the chapter has outlined a number of strategies for implementing the benchmark standards. However, the Task Force wants to emphasize that the standards also have direct utility for owners of rental housing regardless of the status of changes in state and local laws and regulations. While governments, insurers, lenders, and others are working to operationalize the benchmark standards, property owners can voluntarily incorporate the applicable provisions of the stan-

dards into their management procedures and maintenance practices. For some elements of the standards, property owners may want to wait to see the specific requirements established by their insurer or local government. However, many aspects of the standards, such as Essential Maintenance Practices (see Exhibit 3-2), are common sense, low-cost actions that owners can take immediately.

The benefit to owners of immediately implementing the standards is that doing so reduces their tenants' chances of exposure to lead-based paint hazards. By following the standards, owners reduce the likelihood of facing legal action in response to a poisoned child and improve their prospects of getting affordable liability insurance. If an EBL child is discovered, owners can demonstrate action taken to protect tenants from lead-based paint hazards.

Recommendation 4-5:

Adoption of Lead-Based Paint Hazard Control Standards by Property Owners. Owners of pre-1978 rental housing should voluntarily revise their operations and maintenance practices, as needed, to incorporate the benchmark lead-based paint maintenance and hazard control standards.

In certain situations, owners may find it to their own advantage to take lead-based paint hazard control measures that exceed the benchmark standards. For example, substantial rehabilitation, renovation, and weatherization projects offer an opportunity to integrate abatement activities into other work, sometimes with only marginal increases in cost. The replacement of windows painted with lead-based paint not only controls lead hazards, but can also improve energy conservation and aesthetics. Conducting voluntary abatement of lead-based paint in a unit relieves owners of the cost and responsibility of conducting Essential Maintenance Practices, Standard Treatments, ongoing monitoring and dust testing, and other hazard control measures—as well as increases the supply of hazard-controlled units available for families with a young child.

Recommendation 4-6:

Taking Advantage of Opportunities for Abatement.

The Task Force urges owners of pre-1978 units to take advantage of opportunities to undertake permanent abatement, such as during the course of substantial rehabilitation, renovation, and weatherization projects.

4.2 ENSURING COMPLIANCE WITH LEAD-BASED PAINT HAZARD CONTROL STANDARDS

As the benchmark lead-based paint maintenance and hazard control standards are embraced by states, local governments, and other entities (for example, insurers), property owners will gain a clearer understanding of their responsibilities and can take appropriate action in their units. The Task Force expects that many owners will be persuaded to implement these standards as a result of incentives such as availability of financing, affordable property liability insurance, and liability limitation. However, the Task Force recognizes that not every property owner will voluntarily take the actions needed to control lead-based paint hazards. While the Task Force has sought to use market-oriented approaches wherever possible, effective enforcement of lead-based paint related codes and regulations is a key element in the set of complementary strategies for protecting children from lead hazards.

Limited local resources for enforcement of housing codes and existing lead poisoning laws have hampered the effectiveness of enforcement efforts in many areas. This chapter outlines two valuable strategies for ensuring owner compliance with local laws and regulations enacting lead-based paint standards:

- Focusing enforcement efforts on high-risk units; and
- Involving community-based organizations.

There is also a role for tenants in ensuring that potential lead-based paint hazards in units are addressed. Chapter 3 recommends that tenants promptly report deteriorating paint to property owners. Chapter 10 discusses ways to educate parents about potentially hazardous conditions and the steps they can and should take to protect children.

Targeting State and Local Enforcement Efforts

The Task Force anticipates that in adopting the benchmark standards, states and cities will revise their housing codes and public health regulations. While jurisdictions often lack the capacity to enforce all provisions of their codes and regulations in every housing unit, the Task Force urges state and local governments to make compliance with lead-based paint-related standards an enforcement priority for rental units that have a high likelihood of lead-based paint hazards.

Peeling paint in pre-1950 rental housing very often contains lead and, therefore, poses a serious health hazard to a young children and pregnant women. Changing local housing/health codes so that extensive amounts of peeling paint in pre-1950 housing constitute a significant health and safety hazard would aid lead-based paint enforcement efforts by allowing code inspectors to check these units for peeling paint and other emergency hazards without having to perform a full code inspection. Reducing the scope of the inspection that must be performed when checking pre-1950 rental units for peeling paint increases local enforcement capacity by enabling inspectors to examine many more units.

Housing units occupied by a young child or a pregnant woman where there is evidence of lead-based paint hazards pose an immediate health threat to the occupants. One example is a pre-1950 unit occupied by a household with a child under age six where the tenant has reported the presence of extensive peeling paint. Another example is a unit occupied by a young child that is located in a building where an EBL child was found to be poisoned by lead-based paint hazards in the building. Making these types of units a priority for enforcement will do the most to protect young children and pregnant women from lead poisoning. One method of targeting local enforcement resources is to establish a schedule of priorities for performing housing code inspections similar to the sample provided in the box on the following page.

Sample Priorities for Performing Code Inspections

1. Rental units occupied by a household with a pregnant woman or a child under age six where peeling paint has been reported by an occupant, community organization, or private risk assessor
2. Other rental units in buildings with an EBL child
3. Rental units located in neighborhoods with a high number of EBL children

In addition, code officials can make checks for lead-based paint-related code violations a standard procedure when inspecting rental units for other reasons. For example, both housing code and building inspectors could perform a visual check for peeling paint whenever they are inspecting a pre-1978 unit with a young child or a pregnant woman.

Finally, state and local jurisdictions should devote a share of their enforcement resources to monitoring risk assessors, inspectors, and abatement contractors. Ensuring the quality of their work is critical to the success of local efforts to prevent childhood lead poisoning. Similarly, having housing inspectors or other local officials perform periodic spot checks of properties with Lead Hazard Control Plans or documentation of compliance is vital to maintaining the integrity of these mechanisms.

Recommendation 4-7:

Targeting Enforcement. The Task Force recommends that state and local governments target lead-based paint enforcement efforts toward rental units with the highest risk of lead-based paint hazards by:

- *Treating the presence of extensive deteriorating paint in pre-1950 units as a top tier housing code violation (unless it is shown not to be lead-based paint);*
- *Focusing enforcement activities on high risk rental units;*

- *Units in which the property owner has not responded to notification of deteriorating paint*
- *Other units in a multifamily building with an EBL child (and identified lead-based paint hazards)*
- *Units in neighborhoods with a high number of EBL children*
- *Performing a visual examination for deteriorating paint whenever housing and building inspectors are inspecting a pre-1978 unit occupied by a family with a young child or a pregnant woman;*
- *Monitoring risk assessors, inspectors, and abatement contractors, as well as properties with Lead Hazard Control Plans for documentation of compliance.*

Roles for Community-Based Organizations

Involving qualified community-based organizations in efforts to reduce lead hazards will help residents and owners, as well as state and local jurisdictions reach further with their scarce resources. In order to conduct such programs, participants must receive training appropriate to the activities being performed. For example, community-based crews who have taken the one-day operations and maintenance/interim control training course could work as swab teams or, with proper training and credentials, staff of local organizations could become certified as lead-based paint inspectors or risk assessors. Initiatives to help build the capacity of community-based organizations will be needed to enable them to participate effectively in state and local lead programs. While this may involve a commitment of resources, it will provide a valuable investment in the capacity of local communities to address lead hazards.

Community-based organizations can assist by:

- Raising resident awareness of lead-based paint hazards, including the dangers of unsafe work practices and lead dust, as well as the measures parents can take to protect children;

- Encouraging owners to comply voluntarily with benchmark and/or applicable code standards;
- Encouraging tenants to report deteriorating paint to property owners and informing tenants of their legal rights;
- Making visual checks for deteriorating paint at the request of tenants and notifying property owners when problems are found; and
- Notifying local code enforcement agencies (or other responsible agencies) if owners fail to respond to the notification of deteriorating paint or an EBL child.

Because children, parents, and property owners all have rights that need to be protected, the Task Force urges states and cities that enlist the help of community-based organizations to develop well-defined roles for these organizations and ensure that they obtain the training needed to properly perform their functions. Jurisdictions should also make clear that the responsibility for enforcement of lead-based paint requirements rests with local officials.

Recommendation 4-8:

Enlisting the Help of Community-Based Organizations. The Task Force recommends that jurisdictions seek to enlist the help of community-based organizations, including community-based contractors, in areas with concentrations of higher priority units, in addressing lead hazards through developing education, risk assessment, and lead hazard control activities using staff, or volunteers who have received appropriate training.

4.3 ECONOMICALLY DISTRESSED UNITS

Making Lead-Based Paint Related Services Available to Economically Distressed Units

Economically distressed units present by far the greatest challenge when implementing the benchmark standards. Typically, these units have the most serious lead hazards and, by definition, the least capacity and fewest resources to respond. Millions of rental units have a marginal or negative cash flow, and millions of their occupants already pay more than they can afford

for rent. Often, a variety of other code violations must be corrected (sometimes at considerable expense) before lead-based paint hazards can be controlled.

The Task Force has struggled to identify a variety of strategies appropriate for economically distressed units. In implementing efforts to control lead-based paint hazards, it is imperative that state and local governments be sensitive to the economic realities of affordable housing, in order to avoid the unintended consequences of disinvestment and abandonment.

While the Task Force's recommendations rely on private market forces to the maximum extent possible, the sad reality is that economically distressed units will not readily respond to nor benefit from these mechanisms. The principal strategy for economically distressed units must be public subsidies—and federal, state, and local decisionmakers must recognize this reality and significantly increase the resources available. Investments to maintain and improve our affordable housing and control lead hazards will produce direct benefits in terms of our children's health and our nation's well-being. The Task Force's recommendations on targeted public subsidies are provided in Chapter 5.

In the event that subsidies and other assistance are not available, owners of economically distressed properties can still improve their situation by taking as many of the protective actions required under the benchmark standards as they can afford. While partial implementation of the standards would still leave a property short of full compliance, the owner could reduce the risk of a young child being poisoned and demonstrate some effort to protect the health of residents.

State and local governments can assist owners of economically distressed properties in meeting the maintenance and hazard control standards through means other than direct financial assistance.

- **Relocation Assistance.** In distressed properties where the likelihood of lead-based paint hazards is high and the owner can only afford to take limited protective measures in the near term, relocating willing residents to units known to be hazard-controlled may be the most effective short-term strategy. Local housing and public health agencies can assist owners by helping to match willing residents to hazard-controlled units in other properties.

- **Offering Hazard Evaluation Services.** In some distressed properties, treating identified lead-based paint hazards may be more cost-effective than performing Standard Treatments. State and local governments can assist owners of these properties by performing a risk assessment for the owner and, where appropriate, assisting in developing a Lead Hazard Control Plan. This service allows the owner to devote the property's limited resources to targeting control activities toward identified lead-based paint hazards, with priority attention given to units occupied by families with a young child or a pregnant woman.
- **Providing Hazard Control Services.** Another option for assisting economically distressed properties is for state and local governments to offer low-cost services that will reduce lead-based paint hazards. For example, local agencies could make specialized cleaning services available at a reduced rate to owners of distressed properties. While this service alone would not bring a property into compliance with lead-based paint maintenance and hazard control standards, it would enable the owner to use available resources for other protective actions, such as repairing deteriorated paint.

Recommendation 4-9:

Making Lead-Based Paint Related Services Available for Economically Distressed Housing. The Task Force recommends that public and private health and housing agencies and organizations expand lead poisoning prevention services to owners and occupants of economically distressed housing by establishing programs to:

- *Assist in relocation of families with a young child to post-1978 or lead-based paint hazard controlled units;*
- *Provide risk assessments to help owners target lead-based paint hazard control efforts and develop Lead Hazard Control Plans; and*
- *Provide hazard control services (for example, specialized cleaning teams or window replacement as part of weatherization).*

Enforcement in Economically Distressed Properties

The Task Force expects that lead-based paint maintenance and hazard control standards will apply to all properties, including those experiencing economic distress. However, owners of economically distressed properties may lack the resources necessary to bring their units into full compliance with lead-based paint maintenance and hazard control standards immediately. Effective enforcement strategies for these properties must address the economic constraints facing their owners.

In cases in which owners of economically distressed properties can demonstrate positive efforts to comply with lead-based paint maintenance and hazard control standards, state and local governments should make every effort to offer public subsidies to help these owners fully comply with lead-based paint requirements. Enforcement agencies can also support a distressed property owner's efforts to meet lead-based paint requirements by allowing some flexibility in the schedule for achieving full compliance, particularly when owners of these properties are actively seeking financial assistance to cover the cost of the necessary work. These approaches reflect an enforcement strategy that rewards good faith efforts by owners to comply, seeks to help them overcome economic hurdles, and still holds them accountable for meeting lead-based paint requirements.

Recommendation 4-10:

Enforcing Standards in Economically Distressed Housing. The Task Force recommends that state and local government enforcement of lead-based paint maintenance and hazard control requirements be conducted in a manner that takes into account the financial constraints faced by owners of economically distressed housing by:

- *Using public subsidies in tandem with enforcement; and*
- *Extending compliance schedules for owners who can document need and are actively seeking financing and/or public subsidies.*

Public and Private Financing

Any strategy to reduce the hazards of lead-based paint must recognize these economic facts:

- The costs to control extensive lead-based paint hazards are high;
- The units most in need of controls are typically those least able to support the costs; and
- The marketplace does not currently recognize the value of controlling lead-based paint hazards.

The costs to control lead-based paint hazards vary considerably depending upon the size of the unit, the condition of the property, and the type and severity of the hazards. While some property owners can afford the cost of controlling hazards without financial assistance, many owners, particularly owners of low-income rental housing, must borrow funds to pay for hazard evaluation and control. The availability of private financing depends upon the economic condition of the borrower and the property. While, for the most part, relatively affluent owners with good credit can borrow money from private lenders at conventional interest rates and terms, many owners will find lenders unwilling or unable to make loans to control lead-based paint hazards.

A lender's ability to finance lead-based paint hazard control is constrained by underwriting policies and bank regulations that protect the fiscal integrity of financial institutions. Underwriting evaluates three aspects of the financial transaction:

1. **Ability to pay.** Lenders assess whether the borrower will have the income needed to make required loan payments, as well as to meet other financial obligations.
2. **Value of property.** Lenders assess whether the property has sufficient value so that if the borrower defaults, the lender can sell the property to recover the outstanding loan amount.

3. **Exposure to unpredictable claims.** Lenders assess the costs that they might incur in the case of an eventual default, including the extraordinary costs that might be incurred as a result of a liability claim, such as one related to a lead-based paint poisoning.

Without special encouragement and incentives, private financing simply will not be available to some segments of the housing market. Section 5.1 discusses ways in which private lenders can be persuaded to play an enhanced role in financing lead-based paint hazard evaluation and control.

While increased private funding will meet a portion of the housing market's needs for financing, a large number of older properties with lead hazards has insufficient financial resources to address the problems. The owners of properties in this segment of the housing market, composed of low-income, owner-occupied housing and rental properties with insufficient income to cover property improvement costs, cannot afford to repay loans at market interest rates. Nor can many property owners in this category pass private lender credit standards and meet typical loan-to-value ratios.

Several existing government programs finance lead hazard control for borrowers who cannot meet conventional underwriting requirements. States such as Massachusetts and Maryland provide financing for lead-based paint hazard evaluation and control through appropriated funds and tax credits. At the federal level, HUD's Lead-Based Paint Hazard Reduction Program has made grants to more than 50 state and local governments to evaluate and control lead-based paint hazards. With some modification, other federal programs, including the federal tax system, can

provide modest additional resources for lead hazard control. Section 5.2 provides recommendations related to public financing.

Existing federal funding sources and most state and local housing programs are already burdened by supporting their original purposes. They cannot be expected to adequately respond to the sizeable need related to lead-based paint hazard control. The Task Force, therefore, believes that a broad, dedicated funding source is required to address the unmet costs of lead-based paint hazard control. Without such funding, poor children who live in severely deteriorated housing simply will not be able to escape conditions that endanger their health. Further, the imposition of hazard control standards on economically marginal properties without providing public subsidies to pay for proper maintenance and control could result in further deterioration and even abandonment. The Task Force believes that a major commitment of resources to address the problem of lead-based paint hazards is justified because the root causes and the impacts of lead poisoning extend far beyond the current inventory of tenants, property owners, and lenders. The costs extend to our society as a whole and therefore must be borne by all of us. Section 5.3 discusses the creation of a Lead Trust Fund to provide a dedicated, substantial source of financing to address lead-based paint hazards in low-income housing.

5.1 PRIVATE FINANCING FOR LEAD-BASED PAINT HAZARD CONTROL

Private lenders already meet a portion of the demand for financing lead-based paint hazard control. Through loans for acquisition and repair of housing, private lenders finance improvements that help promote safe housing. But the private sector can do more. By creating an investment climate that offers incentives to make loans, reduces barriers to lending, and promotes appropriate hazard evaluation and control, lenders can provide additional homeowners and rental property owners with access to needed capital while maintaining sound underwriting standards.

Community Reinvestment Act

One mechanism for stimulating greater private investment in lead-based paint hazard control is the Community Reinvestment Act (CRA). Enacted in 1977, the CRA requires lenders to serve the credit needs of the entire service area for which they are chartered, including any low- and moderate-income neighborhoods. The CRA can thus influence the flow of private sector funds into communities that typically contain older housing with a high likelihood of lead-based paint hazards.

Currently, a regulated lender's performance is examined by the appropriate regulatory agency to evaluate how well the lender is meeting the credit needs of the lender's entire service area. To date, none of the four regulatory agencies administering the CRA (the Office of the Comptroller of the Currency, the Federal Reserve, the Federal Deposit Insurance Corporation, and the Office of Thrift Supervision) explicitly recognizes loans, grants, or investments for the evaluation or control of lead-based paint hazards when preparing a lender's CRA "report card."

As a legitimate credit need of many low- and moderate-income communities, the financing of lead-based paint hazard evaluation and control constitutes a CRA-related activity for which lenders should be entitled to receive credit. Both the regulatory agencies and the lenders subject to CRA's requirements should be made aware that facilitating evaluation and control of lead-based paint hazards helps meet a community's credit needs. Once this proposition is accepted, lenders should be more willing to consider and approve such commitments.

By recognizing lead-based paint related investments as legitimate CRA activities and publicizing innovative lender activities, bank regulators can influence the flow of funds to lead-based paint hazard control. Recommendation 5-1 below mobilizes the CRA's "reward" system to encourage and assist in the development of lead-based paint hazard evaluation and control. Recommendation 5-2 should increase the participation of lenders in lead-based paint evaluation and control activities by providing them with examples to follow.

Recommendation 5-1:

Including Hazard Evaluation and Control Under the Community Reinvestment Act. The Task Force recommends that bank examiners include loans, services, investments, and entrepreneurial activities related to lead-based paint hazard evaluation and control when measuring lender performance in meeting community credit needs under the Community Reinvestment Act.

Recommendation 5-2:

Publicizing How Lead-Based Paint Activities Meet Community Needs. The Task Force recommends that federal bank regulatory agencies help promote activities and lending related to lead-based paint hazard evaluation and control by providing examples and models for lenders of how such activities can help meet the credit needs of communities.

Appraisal Industry Role

Appraisers have an important role in real estate transactions and the availability of financing. Their role is limited, however, in identifying and controlling lead-based paint hazards. Lenders use appraisals in underwriting decisions to establish the appropriate size of a loan in relationship to the estimated value of a property. In addition, an appraisal helps lenders to understand how much they can recoup in the market if a property owner defaults on a loan. Appraisers typically make visual inspections and then assess a property's value, based on both the market values of comparable properties and the cost to rebuild.

The function of appraisers as it relates to lead-based paint is limited for several reasons. First, appraisers are not technically competent to make judgments about the presence or absence of lead-based paint hazards nor do they perform paint tests or evaluate the underlying conditions of a property. Second, it is the appraiser's job to *reflect* market value, not to create it. If the market places less value on properties with lead-based paint hazards, appraisers will eventually reflect this fact in their estimates of value, but they cannot be expected to lead the market or create values based on their own opinions or knowledge. Third, appraisal reports are not completed until after the con-

tract of sale is final; so appraisals are likely to come too late to affect the buyer's decision to purchase.

Despite their limited role, the Task Force believes it is important for appraisers to be sensitive to and knowledgeable about lead-based paint hazards and their potential effects on value. With sufficient understanding and training, the Task Force hopes that appraisers will be able to quickly recognize changes in value attributable to consumer concerns about lead-based paint hazards and appropriately reflect these changes in their appraisals.

Recommendation 5-3:

Educating Appraisers. The Task Force recommends that initial and continuing training for appraisers include information about lead-based paint hazards, the Title X required lead-based paint notification and disclosure, and state and local hazard control requirements.

Lender Requirements for Lead-Based Paint Evaluation

Lenders typically do not impose lead-based paint hazard evaluation and control standards on transactions involving owner-occupied one- to two-unit properties and similar-sized rental properties. Lenders rely upon informed purchasers to make appropriate decisions with respect to potential lead-based paint hazards in this segment of the market for two reasons:

1. The risk that owners will default on their loans because of lead-based paint hazard control costs or lead poisoning liability is relatively small; and
2. The cost of any required hazard evaluation and control could be significant relative to the size of many loans.

For properties with three or more rental units, some, but not all, lenders currently impose hazard evaluation and control standards. Lenders impose requirements for rental properties for reasons related to the relationship between owners and tenants and the financial risks associated with lending to income-producing property. In rental properties, owners have obligations with respect to the health and safety of

units. If obligations are not met, tenants may leave, units may not be rented, rental income may be reduced, or, in certain circumstances, tenants may sue the owner. Any of these conditions can create serious financial consequences for an owner, and ultimately the lender may take possession of the real estate through foreclosure.

The lead-based paint evaluation and control requirements imposed by lenders on rental property are not uniform:

- The investigation of hazards varies by lender and the environmental consultant conducting the investigation;
- Recommended operation and maintenance procedures for loan recipients to control hazards may be ambiguous and are often left to the professional judgment of the environmental reviewer; and
- Loans that are not sold to the secondary market may escape evaluation for lead-based paint hazards.

The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac), the two largest secondary market lenders, already require an environmental review of multifamily rental properties. Before Freddie Mac will issue a Letter of Commitment to purchase or refinance a multifamily mortgage, for example, the seller/servicer must retain a qualified environmental consultant and submit an environmental report or survey, which includes an evaluation of lead-based paint hazards. Both secondary market lenders typically require lead testing as part of their evaluation process or permit owners to assume that pre-1978 properties contain lead-based paint.

Whether the presence of lead-based paint is assumed or an evaluation identifies lead-based paint hazards, the secondary mortgage market requires that a borrower have a consultant develop an operations and maintenance plan that the lender accepts and the borrower implements as a condition to the lender's making the loan. For example, in order to meet Freddie Mac's minimum requirements, the operation and maintenance program must include:

- Inspection of common areas and living spaces by trained maintenance staff;
- Remediation of damaged surfaces;
- Wet wipe-down of all horizontal surfaces;
- Annual reinspection, including wet wipe-down; and
- Inspection, repair, and washing of painted surfaces and vacuuming of carpeted surfaces using special vacuuming after a unit is vacated.

After the purchase, sellers/servicers for Fannie Mae and Freddie Mac are required to make regular visual inspections of their properties. Freddie Mac also requires that the seller/servicer confirm that the borrower is maintaining the property.

The following recommendation is directed toward primary and secondary market lenders as well as the Federal Housing Administration (FHA). While the Task Force acknowledges that lenders will make adjustments in their underwriting to accommodate local laws, the nature of lead-based paint hazards in a particular property, and the cash flow of a project, this recommendation is designed to encourage a more uniform lead-based paint hazard evaluation and control standard for loans to pre-1978 rental properties of three units or more units (unless the owners can demonstrate that their pre-1978 property is free of lead-based paint). With the adoption of these standards, the Task Force anticipates that the existence of lead-based paint will no longer be viewed as an impediment to the provision of private financing for housing that complies with the proposed criteria. With a clear set of standards and guidelines for maintenance and hazard control, it is hoped that the lead-based paint related risks associated with loans to older rental properties will be greatly reduced and the flexibility to make quality loans increased.

In establishing underwriting standards related to lead-based paint hazard control, lenders, like state and local government lawmakers, must consider how best to define higher priority units. A lender, particularly one doing business on a national scale and lending in a given community only occasionally, will not be able to identify locally appropriate, across-the-board crite-

ria for higher priority units. Lenders, therefore, should not automatically require standard treatments or risk assessments and hazard control plans for all pre-1950 properties since some pre-1950 properties may pose little or no risk and some post-1950 units may be higher risk. Rather, care should be taken to define higher priority based on the specific circumstances of the property, taking into consideration such factors as the unit's condition, its age, its occupancy, and, where adequate lead screening data are available, the average rates of EBL children in the area.

The Task Force recognizes that owners of some severely economically distressed properties may not be able to comply with the proposed new lead-based paint standards of lenders without public financial assistance. In such cases, it is essential that state and local governments make every effort to offer public subsidies to help owners fully comply with the lead-based paint requirements and to avoid the unintended consequences of restricting the availability of financing that could lead to disinvestment and abandonment. Further, the Task Force recommends that the Federal Government create a trust fund to provide financial support to economically distressed properties. (See Recommendations 5-7 through 5-10.)

***Recommendation 5-4:**
Incorporating Lead-Based Paint Standards in Underwriting. The Task Force recommends that primary and secondary market lenders and the FHA loan insurance program modify their current practices for all rental properties of three units or more built before 1978 to require:*

- *Investigation of lead-based paint hazards prior to loan approval;*
- *Paint stabilization and appropriate cleanup within a specified time after loan closing;*
- *Property owner compliance with the Task Force recommended Essential Maintenance Practices and, for higher priority properties, compliance with either Standard Treatments or risk assessment/hazard control activities; and*

- *For small rental properties (3 to 40 units), annual visual checks of paint condition by owners and documentation to the seller/servicer of compliance with Essential Maintenance Practices and, if applicable, risk assessment/ hazard control activities. For larger properties, confirmation by the seller/servicer of compliance during an annual property inspection.*

Limitation on Lender Liability

Currently, lenders who own real estate are subject to financial and liability risks. A lender providing financing for a residential property containing lead-based paint hazards faces not only the ordinary risk of losing the amount loaned should the borrower prove unable to pay, but also two additional risks if the lender becomes the owner:

1. The extraordinary risk of additional losses should tenants assert lead-based paint-related claims; and
2. Property upkeep, possibly including hazard controls, at a time when the property may be in poor condition and suffering from deferred maintenance.

While lenders are accustomed to underwriting the risk that the principal amount of a loan will be lost due to borrower default, lead-based paint hazards present the risk of losing significant sums in addition to the amount loaned. One sizeable claim could wipe out the lender's new revenues from loans on literally dozens of other properties. This additional risk is hard to underwrite, because lenders cannot accurately predict how often such losses will occur.

In addition to the risks noted above, lenders face another significant problem. Many states apply the rule of joint and several liability, which exposes lenders to potentially large losses in the event of default. According to this rule, a victim of a tort committed by several defendants may recover full damages from any of the defendants, leaving such defendants the burden of recovering contributions from the other defendants. In cases of a lead-poisoned child who may have occupied a unit with lead-based paint hazards for a number of years, a lender who owns the property for only a few weeks could end up paying for all of the damages. The

lender may be unable to obtain any reimbursement from the prior owner, who may be judgment-proof.

The combination of these lead-based paint related risks discourages lenders from making loans on older properties. The risks also deter lenders who do make loans from foreclosing on older rental properties because they are fearful of potential litigation.

States could address the problem by protecting lenders from liability for some period of time while they are owners of defaulted real estate. This would reduce the likelihood of an expensive lead-based paint related lawsuit and thus lower one obstacle to lending funds to older properties. The protection could be available, for example, only if lenders:

- Take specific steps to implement Essential Maintenance Practices;
- Respond to tenant complaints and to children with EBLs; and
- Act promptly to sell the property.

While this approach may reduce the availability of compensation to some poisoned children, the protection would remove a major disincentive to finance acquisition and repair of older rental properties. With more funds available to older properties, there is greater potential for making investments to control lead-based paint hazards and thus less likelihood that children will be poisoned.

It will take time for a lender who assumes possession of a property to stabilize paint and implement appropriate maintenance activities. The protection for lenders, described above, will have the desired effect only if it protects the lender from liability for injuries that occur before it is physically possible to bring the property into compliance with Essential Maintenance Practices. A reasonable length of time for a lender to implement Essential Maintenance Practices is 90 days.

A lender who has implemented Essential Maintenance Practices within the 90-day period should also be protected from liability for some length of time after the expiration of the period if the property remains in compliance by continuing to follow the practices. The extension would protect lenders during

Public Subsidies Help Make Lead-Based Paint Deals Work

Public subsidies for housing can take many forms. When structured as loans, they are sometimes referred to as “soft seconds” because the public agency may not be able to collect repayments in the case of a default.

Grants are public subsidies that require no repayment.

Direct below-market interest rate (BMIR) mortgages are loans made by public agencies at interest rates well below those charged by private lenders.

Deferred payment loans are a form of BMIR loan. They are usually made at low interest rates, but sometimes no interest is charged. Repayment of principal or interest or both may be deferred until a private first mortgage is paid off. Sometimes the amount to be repaid is written off, for example 1/10th each year for ten years, if certain conditions are met over time.

Loan guarantees or mortgage insurance are not loans, but public subsidies that protect private lenders from losses if a loan is not repaid. Guarantees or insurance, which cost less than loans or grants, reduce a private lender’s risk and therefore encourage lenders to make loans using more flexible lending criteria.

the period when they are actively marketing a property for sale. The extended liability limitation would permit lenders to actively market properties, negotiate with new owners, and enter into purchase agreements without having to make major physical investments that are typically the work of a long-term owner. An extended protection period also would help deter lenders from selling properties too quickly, a practice that can have detrimental effects on neighborhoods and housing markets, for fear of liability exposure during the marketing period.

The Task Force believes that lenders should be allowed to rely on Essential Maintenance Practices for up to 8 to 12 months, depending upon the size of the property, even for higher priority units to which more stringent lead-based paint hazard control standards generally apply. In order to encourage lenders to implement and enforce the Task Force proposed rental property standards (see Recommendation 5-4), this proposed liability limitation should only be available

to lenders who adopt the proposed standards. However, if a child with an EBL resides in the property, hazard control should be required as it would be for other owners (see Exhibit 3-3).

New purchasers of a rental property are exposed to similar liability risks and therefore deserve similar protection. New owners and their management staff often inherit deferred maintenance and repair problems from previous owners. They require time to make needed repairs, conduct Essential Maintenance Practices, and otherwise bring a property into compliance with lead-based paint hazard control requirements imposed by the lender and government agencies. Recommendations with respect to the liability of new owners of property are discussed in Recommendation 6-5 in Chapter 6.

Recommendation 5-5:

Limiting Lender Liability. The Task Force recommends that state legislatures statutorily exempt lenders acquiring property through foreclosure or deeds in lieu of foreclosure from liability for lead-based paint related injuries occurring during the first 8-12 months following acquisition of title to the property, as long as the lender:

- Originated the mortgage after the enactment of the legislation and in accordance with the underwriting standards proposed in Recommendation 5-4;
- Implements Essential Maintenance Practices within 90 days after acquiring title;
- Continues to follow Essential Maintenance Practices thereafter;
- Responds to occupant complaints regarding lead-based paint hazard related code violations;
- Responds to notification of the presence of an EBL child in the same manner required of other owners; and
- Engages in diligent efforts to sell the property during the 8-12 months following acquisition.

Public-Private Financing

For a segment of the housing market, a combination of public and private financing is the most efficient means of paying for lead-based paint hazard control. With public-private financing, public agencies provide grants, loans, and loan guarantees to supplement private financing. Under this approach, low- and moderate-income households who would otherwise be ineligible for private financing can obtain the funds they need for lead-based paint hazard control activities. The availability of supplemental public financing is particularly important to ensure that rental projects with lead hazards can meet the underwriting standards described in Recommendation 5-4.

While many primary lenders have established public-private lending partnerships for investment in affordable housing, the secondary mortgage market greatly influences their efforts. The secondary mortgage market brings together investor funds to purchase loans made by primary lenders, thus providing lenders with available cash to make additional loans. The loans made by primary lenders are affected largely by secondary market requirements and federal regulations. Because primary lenders want to be able to sell their mortgages to the secondary market, most are careful to ensure that their underwriting criteria conform to the standards of the key secondary market players. Given their strong influence on the primary mortgage market, the two largest secondary markets for mortgages, Fannie Mae and Freddie Mac, along with HUD, can encourage private lenders to use public resources in conjunction with the lenders' own programs to finance lead hazard control.

Public-private lending partnerships, whether initiated by primary or secondary market lenders, will not be viable unless public financing is carefully structured to conform to private underwriting standards. Public lenders are therefore urged by the Task Force to design their financing for lead-based paint hazard control in the form of soft second mortgages, grants, deferred loans, and similar products that do not interfere with the underwriting constraints of the private sector.

Recommendation 5-6:

Encouraging Public/Private Financing. The Task Force recommends that HUD, Fannie Mae, and Freddie Mac take the lead in urging lenders to develop and implement public-private lending partnerships to finance lead hazard control as part of acquisition and rehabilitation financing. In order to encourage private financing, secondary public financing should be fully subordinated to the first mortgage and should not detract from the borrower's debt repayment capacity.

5.2 PUBLIC FINANCING FOR LEAD-BASED PAINT HAZARD CONTROL

While market forces will be effective in many units, public funds are needed to control lead-based paint hazards in others, particularly in units with values too low to support additional loans for lead-based paint hazard control work and where owners cannot afford to repay additional debt. Because of poor credit, low home values in relationship to existing debt, or simply inadequate income to repay an additional loan, many lower income homeowners cannot afford to invest money in lead-based paint hazard controls. Similarly, owners of low-income rental property often do not receive sufficient income from their investment to make needed repairs. Through appropriation of funds and benefits provided through the tax system, governments at all levels can provide the resources needed to control hazards in older housing.

State and Local Government Financing

Several state and local governments already operate successful loan and grant programs that fund lead-based paint hazard control. One such program is the low-interest loan program of the Massachusetts Housing Finance Agency. This program is restricted to low-income borrowers who apply through local rehabilitation agencies to receive below-market interest rate loans from participating lenders. The funds can be used for lead-based paint hazard control in one- to four-family residences. As the loans are repaid, the agency uses the funds for additional lead-based paint financing.

The Maryland Community Development Agency offers a forgivable deferred payment loan for lead-based paint hazard control. Both owner-occupants and rental property owners can borrow up to 100 percent of the value of the property or \$15,000 per unit, whichever is less. Rental property owners that accept the loans must agree to advertise the availability of assisted units to families that have children with EBLs, and must rent only to families with incomes at 50 percent or less of the state median income. Eligible owner-occupants include any family with an income under 50 percent of the area median, or between 50 and 80 percent of median if occupied by a lead-poisoned child or a pregnant woman.

The City of Milwaukee and the Minnesota Housing Finance Agency provide two examples of grant programs to assist with lead-based paint hazard control.

- Milwaukee offers matching grants to owners of properties with lead-poisoned children. The Health Department, which identifies children with EBLs, operates the program with technical assistance from the Housing Department. The program matches 50 percent of the costs of interim controls, up to \$1,500 per unit.
- The Minnesota Housing Finance Agency provides direct lead-based paint hazard control services free of charge in three major cities. The participating cities hire “swab teams” to clean up homes and perform other interim control activities in properties where there are children with EBLs.

These programs offer models that could be implemented by states and localities across the country, particularly jurisdictions with high concentrations of low-income families living in higher priority housing. The Task Force, therefore, makes the following recommendation:

Recommendation 5-7:

Creating New State and Local Subsidy Programs. The Task Force recommends that state and local governments initiate subsidy programs to complement and enhance the federal resources and that, to the maximum extent possible, federal funds be supplemented by other resources, both public and private.

Federally Funded Housing and Insurance Programs

The Federal Housing Administration (FHA) issues mortgage insurance for loans that can be used to pay for lead-based paint hazard control activities. These loans are made by local lenders, not HUD. The Congress also appropriates funds to state and local governments for housing rehabilitation, including work to control lead-based paint hazards.

The FHA's 203(k) program makes loans available for acquisition and rehabilitation of small (1-4 units) owner-occupied properties. This program is somewhat unique in that loans are made based on the value of property after it is improved, thus making it easier for a property in need of substantial repairs to borrow funds.

The FHA's Title I Home Improvement Program makes loans available for repairing owner-occupied and rental properties. Loans can be made as second mortgages. The underwriting for owner-occupied properties is based on a borrower's creditworthiness and not the value of the property. Thus, these loans are potentially valuable for properties where repairs are needed, but the owner has little equity.

The HOME Program is a federal housing program that provides money to cities and states for construction, rehabilitation, and acquisition of housing. The Community Development Block Grant (CDBG) program provides money to cities and states for a variety of activities, including housing rehabilitation.

HUD Block Grant Programs

The Federal Government, through a number of HUD-funded programs, provides resources for housing rehabilitation. However, existing federal programs often require units to meet minimum standards after rehabilitation. These standards can preclude federal funds from being used solely for lead-based paint evaluation and control. Regulations for existing federal block grant programs that can be used for reduced cost lending, such as HOME and the Community Development Block Grant (CDBG) program, should be adjusted to promote lead-based paint hazard control. HUD could issue technical bulletins to help HOME and CDBG grantees incorporate lead-based paint hazard evaluation and control activities into their programs.

The Administration's 1996 budget proposes consolidating HUD's housing programs, including HOME and CDBG, into a few major block grants. This consolidation is proposed to occur in stages over the next three to four years. With this likely consolidation in mind, the Task Force makes the following recommendation:

Recommendation 5-8:

Incorporating Poisoning Prevention in Existing and Proposed Consolidated HUD Block Grants. The Task Force recommends that continuing HUD programs and any consolidation of HUD funds into larger block grants condition assistance on adherence to the Task Force proposed benchmark standards of lead-based paint maintenance and hazard control — and make lead hazard evaluation and control (including relocation to suitable units) an eligible activity.

The Federal Tax System

The federal tax system offers a potential means of financing lead-based paint hazard control activities. The tax system has several advantages. It is already in place and relatively simple to manage, and administrative costs are relatively low. Processing time can be kept to a minimum. The Task Force has explored three ways of using the tax system to promote lead hazard control.

Federal Income Tax Credit. Federal income tax credits can provide incentives to owner-occupants to undertake lead-based paint hazard controls. Because the value of a credit does not appear until taxes are paid, credits are not financing tools per se. They are useful primarily to owners who have the means to finance needed hazard controls out-of-pocket and who can wait several months to be “rewarded” by a tax credit. Nevertheless, for owner-occupants with sufficient cash reserves or ability to borrow, the tax system could be used to stimulate investment in lead-based paint hazard control by offering income tax credits for qualified hazard control activities.

In order to restrict the potential cost of forgone tax revenues, tax credits should be targeted to households with incomes at or below 80 percent of area median income and to higher priority properties. Further, the maximum credit should be limited to the cost of lead-based paint hazard controls or \$1,500, whichever is less, as is currently the practice in Massachusetts. In order to ensure that work is properly done, taxpayers claiming a credit would have to document that work was properly performed, repairs were made, and dust lead levels were within established limits after the work was completed.

Deductibility of Expenses for Rental Properties.

In addition to offering tax credits, the tax system could also stimulate control of lead-based paint hazards through the way it treats the deductibility of lead-based paint hazard controls for rental properties. The U.S. Internal Revenue Service regulation under Section 162 provides that the cost of “incidental repairs which neither materially add to the value of the property nor appreciably prolong its life” may be deducted as an expense. If lead-based paint hazard evaluation and control expenses could be treated as “incidental repairs” and deducted from current income, such activities would be encouraged. The tax benefit would be immediate, rather than treated as a capital improvement. This is consistent with the fact that lead hazard controls are not currently reflected in the market values of properties.

Low Income Housing Tax Credit (LIHTC). The LIHTC is a substantial federal subsidy that could be used by localities to control lead-based paint hazards. For rental housing, the existing LIHTC already helps pay for repairs and construction of low-income rental housing. In return for the credits, owners must make units available to low-income tenants and keep rents affordable for up to 40 years. However, because of certain technical requirements, the LIHTC is difficult to use to rehabilitate low-income, occupied properties—the very units that often contain lead-based paint hazards and threaten the health of children. While little doubt may exist that low-income households predominate in a building located in a low-income census tract, existing tax credit rules currently require income certification of every unit for which credit is claimed. Income certification may be difficult or impossible to obtain in an occupied building because of tenants’ reluctance to volunteer to owners and managers information about their incomes.

In order to facilitate the use of the LIHTC for lead hazard control activities in occupied properties, the income certification provisions of the program could be adjusted. Rather than require initial income certification of each unit, state housing agencies that allocate the tax credit could be permitted, but not required, to approve credit for rehabilitation and lead hazard control in projects located in census tracts in which at least 70 percent of the households have incomes below 50 percent of the area median income. Property owners would still be required to certify the income of new tenants and perform annual reviews of income eligibility of all households. In addition to other rehabilitation activities, properties receiving credits under these rules would carry out an approved Lead Hazard Control Plan as part of their renovation activities that disturb lead-based paint. The administering state agency would determine the portion, if any, of the state’s tax credit allocation to make available under the special rules.

Recommendation 5-9:

Using the Federal Tax Code to Finance Hazard Control. The Task Force recommends use of the federal tax system to encourage investment in lead-based paint hazard control:

- *Congress should create a federal income tax credit for lead-based paint hazard evaluation and control activities for lower income, owner-occupied properties.*
- *The Internal Revenue Service should confirm that all activities relating to keeping pre-1978 housing units free from lead-based paint hazards be considered deductible expenses in rental housing, pursuant to relevant tax law.*
- *The income certification requirements of the Low Income Housing Tax Credit should be revised to make it easier to use tax credits for occupied rental properties. Owners should be allowed to presume that the percentage of low-income tenants in a building is the same as the percentage in the census tract. To qualify for this presumption and avoid initial income certification, the building must be located in a census tract where at least 70 percent or more of the households are below 50 percent of area median income and lead hazard control is being performed as part of the rehabilitation plan.*

5.3 A TRUST FUND FOR CONTROLLING LEAD HAZARDS

The National Health and Nutrition Examination Survey (NHANES III) clearly establishes that the risk of lead poisoning disproportionately affects lower income and minority children living in central cities. Many of these children live in low-rent housing where the property owner cannot afford to control lead hazards. Others live in homes their parents own but cannot afford to repair. Thus, lead-based paint hazards in low-rent and low-value housing will not be substantially reduced unless sufficient amounts of public funds are dedicated to evaluating and controlling hazards in this housing.

This same housing often needs rehabilitation for other reasons as well: heating and plumbing systems need replacement; new roofs are required; electrical wiring needs repair. While existing federal, state, and local housing resources can be used for lead-based paint hazard control, lead-based paint hazard work should not be forced to compete with funds for other essential housing rehabilitation. Since the net result of such competition would be an overall reduction in the number of units that can be effectively repaired, alternative resources are needed.

To effectively control lead-based paint hazards in housing units with both extensive lead-based paint hazards and economic distress, Congress should establish a dedicated source of ongoing funds. Realistically, only an approach of this nature will deal with the most urgent hazards: those in privately owned, unsubsidized housing that is financially distressed. The funding source should be capable of generating one billion dollars per year for the next ten years—a sum sufficient to control lead-based paint hazards in the nation's high-risk, deteriorated, least financially solvent housing. Assuming an average cost of \$7,500 per unit loan or grant for lead-based paint hazard evaluation and control in deteriorated low-income housing, a one billion dollar fund could treat 133,000 units per year, or 1.3 million units over ten years.

The Task Force recommends that trust fund revenues be allocated by a need-based formula to state and local governments for investments in lead-based paint hazard evaluation and control. State and local governments should be given maximum flexibility to use the funds, establishing their own financing mechanisms and operating procedures. However, the Federal Government, in order to achieve national objectives, should establish strong targeting requirements for investment of funds.

- State and local governments should be required to use the funds only for households with incomes below 50 percent of the median and affordable properties whose owners could not undertake lead-based paint hazard control without subsidized financing.
- Recipients of such loans and grants who own rental property should be required to give preference to households with children who have EBLs and to other very low-income renter households with a young child or a pregnant woman.

Optional ways to generate a trust fund for controlling lead-based paint hazards should be explored by HUD and EPA. One potential source would be a tax on industries that are responsible for releasing lead into the environment.

Recommendation 5-10:

Establishing a Federal Trust Fund. *The Task Force recommends that the Federal Government implement and finance a trust fund to provide grants to help state and local governments clean up lead-based paint hazards in owner-occupied and low-income rental housing. Funds should be generated through a dedicated source capable of providing substantial and sustained revenue.*

Liability and Insurance

The tort liability system, as administered by state courts, holds persons liable when they cause personal injury to others as the result of a failure to adhere to the “standard of care” that a reasonable person would follow. In the context of lead-based paint, tort liability gives rise to an obligation to compensate a lead poisoning victim for harm caused by lead-based paint hazards. Lawsuits enable individuals to recover damages resulting from exposure to lead-based paint, such as medical costs, relocation expenses, lost future earnings, and pain and suffering.

This chapter concentrates on the most common type of lead-based paint litigation: actions against rental property owners by tenants whose children have EBLs. This chapter does not address liability in the context of owner-occupied housing because children generally cannot sue parents because of the doctrine of parental immunity. Even in states where such cases may be allowed for lead-based paint (for example, Massachusetts), few cases are brought because insurance policies seldom cover such claims; insurance policies generally exclude coverage for cases brought by the homeowner’s family.

The primary function of the tort system is to provide compensation for injured parties. But by defining a standard of care to which persons must adhere, the tort system also serves an important, secondary function: promoting behaviors that prevent injuries and thus limit liability. This preventive aspect of the tort system can be harnessed to help prevent childhood lead poisoning. The desire to avoid lawsuits may encourage property owners to minimize their liability exposure by controlling lead-based paint hazards and/or matching families with children to housing free of lead-based paint hazards.

The ability of the liability system to simultaneously compensate poisoned children and promote control of lead-based paint hazards depends on the terms and clarity of the liability standards, which historically have been left to evolve on a case-by-case basis in state courts. Because litigation in most states has not yet been successful in establishing clear standards of lead-based paint hazard control and liability, areas with the highest levels of litigation (for example, Maryland and Massachusetts) have been at the forefront in adopting legislation and regulations to clarify the standards of hazard control and the rules of liability. Clear standards of hazard control and carefully designed liability rules have the potential to motivate rental property owners to undertake reasonable maintenance practices and lead-based paint hazard controls where hazards are likely to exist. In addition, the liability system, in conjunction with clear liability standards, may increase the ability of children to obtain compensation when they are poisoned in units where owners have failed to implement needed maintenance practices and lead-based paint hazard controls. Moreover, carefully designed liability rules and clear hazard control standards could potentially limit the risk of liability for property owners who have taken responsible maintenance and hazard control actions and eliminate the risk of liability for owners whose units present no lead-based paint hazards.

Due to the unique nature of economically distressed housing, changes to the liability system will generally not affect this housing segment. Owners of economically distressed housing often do not have the financial resources to comply with required hazard controls. At the same time, lawsuits against owners of economically distressed housing seeking compensation may be ineffective because these owners have few

assets (for example, the building with lead-based paint hazards) and are uninsured and therefore are relatively judgment proof. Thus, the recommendations in this chapter will not enable owners of distressed housing to comply with lead-based paint maintenance and hazard control requirements.

6.1 THE EXISTING LIABILITY AND INSURANCE SYSTEM

Inadequacies of the Current Liability System

Thousands of lead-based paint damage claims against rental property owners have been filed in federal and state courts and, while no reliable data exist, the number of claims appears to be increasing.¹ In addition, as the health care system tests more children for lead poisoning and the number of children identified as poisoned increases, the potential for litigation grows. In general, most claims have been filed in the northeast United States, but lead-based paint litigation appears to be increasing nationwide. Most reported cases involve dwelling units where nothing was done to control lead-based paint hazards and, more recently, where improperly done hazard control work, remodeling, or renovation created or worsened hazards. There is little claims experience in units where lead hazard controls have been conducted using contemporary, safety-oriented practices.

The current liability system functions poorly in terms of both its ability to compensate poisoned children and the clarity with which it is signalling property owners about what preventive measures they should be taking to control lead-based paint hazards. With respect to compensation, the vast majority of poisoned children will not file lawsuits and be compensated for their injuries through the tort system. When cases are filed, they may take years to be resolved. Even when poisoned children win lawsuits, owners may lack insurance coverage and otherwise be judgment proof, in which case the EBL child will not receive enough (or perhaps any) compensation.

The current liability system also fails to provide rental property owners with clear direction about what standard of care they should follow to minimize liability exposure for lead-based paint claims. Statutory and common laws on lead-based paint vary among the states, and considerable uncertainty exists among owners and insurers. Rental property owners cannot be sure that undertaking lead-based paint control will protect them from lead-based paint claims or increase their ability to obtain affordable insurance.

Thus, all parties have something to gain by making changes in the liability system to promote lead-based paint control by rental property owners and enhance the likelihood that persons will receive at least some compensation if they are injured when lead-based paint hazards are not controlled.

Inadequacies of the Current Insurance System

By purchasing third-party liability insurance, sometimes called Comprehensive General Liability or Owners-Landlord-Tenant policies, property owners can transfer the financial consequences of loss exposures to an insurance company, which will cover most of the amount of the specified types of losses and provide for the sharing of financial losses among all of those insured. Insurers choose the risks they are willing to cover by a process called underwriting, which identifies and evaluates liability risks and sets the premium to be charged for the risks accepted by the insurer. The primary concerns addressed by the underwriting process are the fortuity of occurrence of the risk and the predictability of losses.

Certain qualities of lead-based paint risks currently make them unattractive to insurers. Insurers believe that predicting lead-based paint loss exposure is currently difficult because lead-based paint litigation has been increasing and is unpredictable, broadly recognized standards of maintenance and hazard control in private housing do not exist, and a clear causal link between a policyholder and a lead poisoned person is often difficult to establish, which makes defending against lead-based paint hazard claims difficult (for example, the poisoning may have occurred from expo-

sure to other sources of lead, such as contamination in nearby soil). As a consequence of these concerns, many insurers have moved to explicitly restrict or exclude coverage for lead-based paint under third-party liability insurance policies, particularly in areas of the country with growing lead-based paint claims and substantial amounts of older, physically distressed housing.

These restrictions on the availability of liability insurance for lead-based paint claims are exacerbated by the difficulty that owners in many neighborhoods with the greatest lead-based paint hazards have in obtaining general liability insurance. Insurers often use housing age, condition, and market value as factors in determining whether to write policies for particular properties. Thus, obtaining any insurance may already be difficult for housing with potentially the most serious lead-based paint hazards; that is, older, poorly maintained, and low-value property.

Because of the current lack of available or affordable insurance, many rental property owners do not have insurance covering lead-based paint claims. When children are poisoned in such units, they are less likely to bring lawsuits or receive the compensation necessary to ensure that they get required medical treatment and, where necessary, get relocated.

The Task Force was also concerned that the inability of many owners of rental properties to obtain liability insurance covering lead-based paint claims may ultimately reduce the availability of affordable housing. Responsible property owners with substantial equity in rental properties worry about having no insurance to cover lead poisoning liability suits. The unavailability, unaffordability, or loss of insurance may prompt such owners to sell or disinvest in older rental housing.² Where coverage is available, the cost may be prohibitively high for many owners.

6.2 CONSIDERATIONS IN DEVELOPING RECOMMENDATIONS

This section describes some of the most important factors and assumptions considered by the Task Force in developing the recommendations that follow.

Relationship to Lead-Based Paint Hazard Control Standards

The recommendations that follow are premised on the assumption that the standards of hazard control adopted by the jurisdiction considering these changes in liability and insurance are protective of human health and designed to prevent childhood lead poisoning. Any changes to liability rules and insurance systems *not* based on health-protective standards of hazard control would be unfair and unworkable. If property owners are granted liability relief for undertaking lead-based paint hazard control measures that do not adequately protect children, lead poisoned children would be unfairly deprived of the ability to obtain compensation. Further, insurance companies cannot be expected to write coverage if lead-based paint claims will persist because children continue to be poisoned. Under such circumstances, policies would not be written voluntarily or, if coverage is mandated, insurers will either have to charge exorbitantly high premiums or withdraw entirely from all or part of the habitational insurance market in order to protect their financial viability. Thus, the Task Force premised all of its deliberations on the assumption that the standards of hazard control would be promulgated either prior to or as part of the same legislative/regulatory package as the liability and insurance changes and that these hazard control standards would be health-protective.

Ensuring Compensation While Promoting Lead-Based Paint Hazard Control

In considering the appropriate role of liability relief, the Task Force realized the threat of liability is a two-edged sword. Owners who have no reason to believe that they will be held accountable if their failure to control lead-based paint hazards causes injury to a child may not institute needed controls. On the other hand, the real or imagined fear that even owners who comply with applicable lead-based paint hazard control requirements may be found liable can paralyze the rental property, lending, and liability insurance indus-

tries such that no control activity occurs. One way to mitigate such fears is to increase the availability of liability insurance to spread the risks and costs of potential liability. But insurers will be reluctant to provide coverage without clearly defined liability limits that would make loss exposure more predictable. Therefore, statutorily created liability relief is an important tool for both rewarding and reassuring owners who comply with lead-based paint hazard control requirements and for increasing the availability of insurance for such owners.

As noted above, however, the tort liability system is designed both to promote risk-reducing behavior and to compensate injured parties. Appropriately structured liability relief serves the purpose of inducing lead-based paint hazard control, but this may come at the expense of the compensation function if the liability relief explicitly or de facto eliminates a poisoned child's ability to obtain compensation. The Task Force therefore operated under the principle that statutorily created liability limitations had to be packaged together with an alternative mechanism for ensuring that poisoned children can obtain some compensation, particularly for unreimbursed out-of-pocket medical and relocation expenses.

Another consideration in shaping liability relief was the concern that overly generous relief would prevent rental property owners from doing more than the minimum amount required, even under circumstances where additional hazard control activities might be appropriate and cost-effective. Even standards of lead hazard control that are health-protective leave behind lead-based paint that may become a lead-based paint hazard in the future. As long as there is some residual risk from lead-based paint, owners should be faced with some residual liability to provide an incentive for proper monitoring and maintenance of their properties. The Task Force therefore operated under the principle that the degree of liability relief accorded rental property owners should be proportionate to the extent of hazard control. (This would mean, for example, that only owners of lead-free properties should be relieved of all liability.)

Considering Different Approaches

Operating under the principles just described, the Task Force considered three broad approaches to reshaping the insurance and liability system. The first was simply to recommend that states adopt the benchmark standards of lead-based paint hazard control. This important step would directly address the existing lack of clarity in tort standards of care. Owners who comply and obtain documentation of compliance might in many cases succeed both in obtaining third-party liability insurance and in successfully defending lawsuits. The biggest problems with this approach were uncertainty—insurers and courts might not adopt the benchmark standards as the legal standards of care—and the high transaction costs involved in years of litigation to establish how the regulatory standards would fare in tort litigation.

The second approach considered modifications to the existing tort and liability system that would build on the benchmark standards but use legislation to clarify the relationship of those standards to both tort liability and insurance underwriting criteria. The Task Force considered a variety of mechanisms for increasing the availability of conventional third-party liability insurance for complying owners, including liability relief; the results of these deliberations are summarized in the last part of Section 6.6. Ultimately, however, the Task Force was not convinced that workable mechanisms existed to provide owners with affordable, conventional third-party liability insurance. Serious difficulties were encountered in defining a lead-based paint insurance product that insurers would be willing to sell at a price owners would be willing to buy. In addition, this approach did not address the need for an alternate source of compensation for children poisoned in complying units. A tort/insurance system that includes liability limits does not provide compensation if the limits make the owner not liable. Further, the tort system cannot provide the kind of speedy, no-fault compensation system that the Task Force envisioned linking to liability limits.

The Task Force therefore decided to recommend a third approach, that of having states create a system of offers of remedial compensation that owners of complying units could make to poisoned children based on an established compensation schedule. The offer of remedial compensation system described in Recommendations 6-8 and 6-9 met the Task Force's criteria of providing prompt, no-fault compensation for at least some expenses to poisoned children while giving complying property owners meaningful liability relief. While the system is an alternative to, rather than a substitute for, tort litigation, the Task Force is hopeful that owners and tenants alike will find it attractive to participate in this structured settlement process rather than litigating lead-based paint claims in court.

Summary of Recommendations

The recommendations that follow are designed to balance the competing considerations that have just been outlined. These recommendations are grouped into four areas:

- Improving the adequacy and timeliness of compensation for EBL children;
- Clarifying legal responsibilities of rental property owners not in compliance with lead-based paint hazard control requirements;
- Clarifying and limiting the liability of rental property owners in compliance with lead-based paint hazard control requirements; and
- Increasing the availability of insurance for rental property owners in compliance with lead-based paint hazard control requirements.

6.3 IMPROVING THE ADEQUACY AND TIMELINESS OF COMPENSATION

All children injured by lead-based paint hazards should be able to obtain needed medical treatment and prompt correction of lead-based paint hazards or relocation without the need to resort to the tort system, which cannot provide timely relief. Mandatory

health care coverage could ensure that many poisoned children receive more timely and adequate medical care and are promptly removed from hazardous living situations if required controls are not being implemented. Medicaid, state health programs, and providers of health insurance subject to state regulation could be required to cover medical expenses for eligible poisoned children, including medically necessary relocation costs. Under this approach, injured children would not need to resort to the slow and costly tort system to pay for medical and relocation expenses, and tort litigation against rental property owners might be reduced.

Coverage would probably be limited to necessary medical expenses (including medical and environmental case management) and relocation expenses when relocation is considered medically necessary. Providing for relocation could reduce health care costs because poisoned children could be treated with outpatient chelation therapy. Relocation to a controlled unit also could reduce the likelihood of continued poisoning from uncontrolled lead-based paint hazards. Currently, outpatient treatment of poisoned children is not considered safe if they continue to reside in housing where lead-based paint hazards have not been controlled.

Unfortunately, this type of health care approach would not help poisoned children who are not covered by Medicaid, other state health care programs, or regulated private health insurers. Therefore, a special fund should be created to compensate out-of-pocket medical and relocation expenses of children poisoned by lead-based paint hazards who cannot otherwise obtain such compensation. Such a special "last resort" fund is critically needed. It would provide a safety net for children whose families are without health insurance and who live in uncontrolled housing where hazards are the most serious and the owners generally lack liability insurance coverage.

Eligibility for last resort compensation would be limited to injured parties who are not eligible for medical and relocation benefits from Medicaid or any health care program *and* who cannot obtain compensation from a rental property owner either through an offer of remedial compensation (see Recommendation 6-8 below) or through the tort system because the owner is likely to be judgment proof. The fund would cover out-of-pocket medical expenses and medically necessary relocation expenses. Injured parties, however, could access the fund and still sue an owner of uncontrolled housing for other elements of compensation, such as special education.

This system could be funded by any or all of the following:

- Surcharges on habitation insurance premiums;
- Fees from lead-related industries (for example, paint companies); and/or
- Surcharges on transactions, such as land transfers or mortgages.

Administering a special fund may cause some difficulties for the responsible state agency. For example, where timely eligibility decisions will be important to limit long-term damages to children, the responsible state agency may have difficulty in screening out injured persons whose property owners are not judgment proof or were in compliance with hazard control requirements. In addition, while the fund could have the right to sue owners who remain potentially liable in tort law to recover medical and/or relocation expenses paid by the fund, obtaining indemnification from responsible parties may be infeasible in most cases due to the high costs of litigation.

Recommendation 6-1:

Requiring that Health Care Programs Cover Medical and Relocation Costs. The Task Force recommends that states mandate that Medicaid, other state health care programs, and regulated private health insurers cover medical and, where medically necessary, relocation expenses for children injured by lead-based paint hazards.

Recommendation 6-2:

Creating A Last Resort Fund. The Task Force recommends that state legislatures create a special fund to compensate reasonable out-of-pocket medical and relocation expenses of children poisoned by lead-based paint hazards who cannot otherwise obtain such compensation.

6.4 CLARIFYING LEGAL RESPONSIBILITIES OF NONCOMPLYING OWNERS

Injunctive Relief

Where an owner fails to comply with lead-based paint hazard control requirements, follow a hazard control plan, or respond to a notice of a potential lead-based paint hazard, households with a young child or pregnant woman should be able to obtain injunctive relief to require compliance with lead-based paint hazard control requirements or relocation to a comparable, hazard-controlled unit. Injunctive relief would reduce poisoning from lead-based paint hazards by requiring compliance or relocation prior to a child or pregnant woman actually having EBLs. Injunctive relief should be available only where owners are not in compliance with applicable standards. In housing units subject to risk assessment/hazard control plans, injunctive relief would only be available to enforce a plan. Judges should have the authority to order relocation of occupants if compliance will be substantially delayed and under other appropriate circumstances.

In order to obtain injunctive relief, a plaintiff should demonstrate that the owner:

- Is in violation of state standards or local housing codes concerning lead-based paint hazards; and
- Has not responded to an occupant's notice.

In addition, a child less than six years old or a pregnant woman must reside in the unit. EBLs, however, should not be a necessary prerequisite to seeking injunctive relief.

Rebuttable Presumption

A Rebuttable Presumption is a legal decision rule that provides that a fact or position will be accepted as the truth by the judge or jury unless it is specifically refuted or contradicted by evidence.

In granting injunctive relief, courts may consider the owners' good or bad faith. The court may direct a rental property owner to comply with the lead-based paint hazard control requirements or to relocate the tenants. Monetary damage awards are not part of injunctive relief. Persons injured by lead-based paint hazards, however, should retain the option to seek monetary damages for lead-based paint under the tort liability system and other existing remedies under state or local landlord-tenant laws and regulations. For example, injured persons could still seek compensation for lead poisoning damages. Courts should offer dispute resolution services to expedite the resolution of such actions and allow the parties to try to work out a mutually acceptable remedy.

Procedurally, injunctive relief for failure to comply with lead-based paint hazard controls should be considered an emergency matter and the judicial response should be expedited. To increase access to the courts for households with a young child or pregnant woman, attorney fees should be awarded to successful plaintiffs. On the other hand, to discourage frivolous suits, a court should be able to require a party bringing such action against a rental property owner to pay for the owner's attorney fees. Courts should offer dispute resolution services to expedite the resolution of such actions and allow the parties to try to work out a mutually acceptable remedy.

Recommendation 6-3:

Providing for Prompt Injunctive Action for Noncompliance. The Task Force recommends that states establish an action for injunctive relief in units where owners are not in compliance with lead-based paint hazard control requirements.

Rebuttable Presumptions Regarding Liability

In order to increase the ability of an injured party to obtain compensation through the liability system, state legislatures could statutorily establish rebuttable presumptions in situations where an owner is subject to required lead-based paint maintenance and hazard control requirements, but has not implemented Essential Maintenance Practices or other hazard controls. For example, it could be presumed that owners knew or should have known of the presence of a lead hazard. Similarly, an EBL in a child who lived longer than a specified amount of time in a unit that had not met the hazard control standard could be presumed to be caused by a lead hazard in the unit and the burden of proof would be shifted to the defendant to prove that the EBL was caused by a source of lead exposure outside the unit.

These rebuttable presumptions shift the burden of proof in a lawsuit, making it more difficult for owners who have not acted to control hazards to defend lawsuits. Thus, owners would be encouraged to reduce lead-based paint hazards. In addition, owners who have not implemented lead-based paint hazard controls would not be eligible for the liability limitations available to complying owners (see Recommendation 6-7). Clarifying liability, however, may not affect the actions of those owners who cannot afford to conduct required lead-based paint hazard controls.

Rebuttable presumptions would not affect the availability of punitive damages. Under existing state laws, punitive damages generally are allowed if an owner acted in a willful and reckless manner and the owner's action or inaction increased the risk of harm from lead-based paint.

Liability should be enhanced for owners of pre-1978 rental housing subject to lead-based paint requirements where no Essential Maintenance Practices or lead-based paint hazard controls have been implemented. Enhanced liability will create incentives for owners to reduce lead-based paint hazards and will help injured parties obtain compensation. The Task Force, however, decided not to recommend changes to the existing tort liability system for rental property owners who implemented some but not all lead-based paint maintenance and hazard control requirements.

Recommendation 6-4:

Establishing Rebuttable Presumptions Where Owners are Not in Compliance with Required Hazard Controls. The Task Force recommends that states statutorily clarify liability for owners subject to required lead-based paint maintenance and hazard control requirements who have not implemented any required controls. Such presumptions would shift the burden of proof on specified issues, such as knowledge or causation, to owners.

6.5 LIMITING LIABILITY OF COMPLYING OWNERS

New Owners

New purchasers of residential property containing lead-based paint hazards are subject to financial and liability risks because of the potential for tenants to assert lead-based paint claims. New owners and their management staff may inherit deferred maintenance and repair problems from previous owners. It may be difficult or impossible to be in compliance with Essential Maintenance Practice requirements immediately upon assuming ownership, since maintenance workers must be trained and deteriorated paint repaired.

Bona fide new owners need a brief period to come into compliance with Essential Maintenance Practice requirements. (Bona fide purchasers are those who buy a property in a legitimate arms-length transaction rather than through some type of sham transaction.)

During this time, owners would still be subject to other requirements (for example, responding to notice of an EBL child or performing a Standard Treatment in a turnover unit) and the liability limitation would not apply if these requirements were not met. While this liability limitation may reduce the availability of compensation for some poisoned children, it would increase the incentive of owners to purchase older rental housing and create an incentive to promptly come into compliance with applicable lead-based paint maintenance and hazard control standards.

Recommendation 6-5:

Limiting New Owner Liability. The Task Force recommends that state legislatures statutorily exempt a bona fide new purchaser of rental property from liability claims asserting lead-based paint related injuries occurring during the first 90 days after acquiring title to the property if by the end of the 90 day period the purchaser has implemented Essential Maintenance Practices and if during the 90 day period the purchaser complies with all other applicable lead-based paint hazard control requirements.

Lead-Free Housing

In order to increase incentives for owners to abate lead-based paint, a complete defense from potential liability could be awarded to rental property owners whose units are lead free. To demonstrate that their units are lead free, owners would have to have inspections done and obtain a certification by a certified inspector. No liability protection would apply if a certificate has been fraudulently obtained.

Recommendation 6-6:

Establishing a Complete Liability Defense for Lead-Free Units. The Task Force recommends that state legislatures establish a complete defense to lead-based paint liability for rental property owners who have non-fraudulently obtained a certificate of lead-free status from a licensed inspector.

Rental Housing in Compliance with Lead-Based Paint Hazard Control Requirements

Owners who have complied with health-protective regulatory requirements and have taken actions to reduce lead-based paint hazards could have limitations placed on their potential liability for situations in which lead-based paint remains in their units. In terms of the benchmark national standards in Chapter 3, liability limits would apply to owners who perform Standard Treatments or control their lead-based paint hazards identified by a risk assessment either promptly or pursuant to a Lead Hazard Control Plan. These liability limitations, as recommended below, would operate in situations where an injured party seeks damages through the tort liability system, rejecting the alternative offer of remedial compensation (see Recommendation 6-8).

To qualify for liability limits, owners would have to non-fraudulently obtain a Certificate of Lead Hazard Status from a certified risk assessor or inspector (see Section 6-7). Certification would be based on a visual inspection and demonstrated compliance with dust clearance standards. These liability limits would increase incentives for owners to control lead-based paint hazards and thereby reduce their potential for liability and potential damages if liable.

An example of a liability limitation could be the establishment of a rebuttable presumption. Under this approach, an owner in compliance with regulatory requirements to reduce lead-based paint hazards would be presumed to have complied with the legal duty of care and therefore would not be liable unless the plaintiff could rebut this presumption.

Other potential liability limitations could eliminate the risk of very large payments by establishing a damage cap or prohibiting punitive damages. Damages could be capped at a specified dollar amount or states could establish several different caps to encourage owners to further control lead-based paint hazards in order to gain greater protection from liability claims. For example, owners who have implemented only Standard Treatments could be encouraged to undertake lead-

based paint hazard abatement measures to qualify for a lower cap on damages. (The Task Force does not recommend any specific amounts.) In addition, punitive damages could be prohibited when owners are in compliance with lead-based paint regulatory requirements. In addition to encouraging owners to control lead-based paint hazards, limitations on damages could also encourage insurers to provide owners with liability insurance coverage for lead-based paint claims by increasing the predictability of damage awards.

Another type of liability limitation would restrict the ability of poisoned children to bring a claim against an owner who has implemented lead-based paint hazard controls based on blood lead levels. A child could be barred from bringing a lawsuit against an owner unless his or her blood lead level is greater than a specific number of micrograms per deciliter. The threshold could depend upon the level of lead-based paint hazard controls an owner has implemented. (The Task Force does not recommend any specific blood lead level thresholds.)

Potentially, liability limitations may reduce the strength of incentives of owners to completely abate lead-based paint hazards or take other actions beyond those required to obtain liability limitations. Liability limits also would restrict the amount of resources available to compensate poisoned children. For example, where injured children are entitled to compensation, liability caps may limit their recovery to less than their actual damages or reduce the availability of legal representation on a contingency fee basis. Thus, liability limits are recommended only for states that have established a source of compensation other than the liability system to compensate children. (See Section 6-6 for discussion of an offer of remedial compensation system.)

Recommendation 6-7:

Limiting Liability for Units in Compliance with Health-Protective Lead-Based Paint Hazard Control Requirements. The Task Force recommends that states which establish an offer of remedial compensation or other alternate compensation systems limit liability for

owners of rental properties with lead-based paint who have implemented hazard controls that meet health-protective regulatory requirements, such as statutorily establishing a rebuttable presumption of due care.

6.6 INSURANCE AND COMPENSATION FOR COMPLYING UNITS

One of the most complicated issues debated by the Task Force was how to provide at least some compensation for EBL children residing in units in compliance with lead-based paint hazard control standards where the owner is protected by statutorily-created liability limitations (see Recommendation 6-7). As discussed in Section 6.2, the Task Force ultimately decided to recommend that states develop a new or modified type of insurance for complying owners who make an offer of remedial compensation to compensate EBL children. The offer of remedial compensation system is explained in the following sections. The Task Force realizes, however, that this approach represents a substantial departure from conventional tort/liability insurance systems and that states may not adopt this approach. Therefore, the last section presents an alternative recommendation for increasing the availability of conventional liability insurance for complying owners.

Offers of Remedial Compensation³

The Task Force supports the creation of state offer of remedial compensation systems to compensate children who are poisoned despite an owner's compliance with required lead-based paint hazard controls. (The system would not apply, however, to units certified as lead free.) Under this system, parties injured by lead-based paint hazards would make claims directly to the owner of rental property and the owner would decide whether to make an offer of remedial compensation. Insurance policies that cover the offer of remedial compensation could be made available to owners. This

system would be the primary mechanism for compensating parties injured from lead-based paint hazards in controlled units.

Such an offer of remedial compensation system would increase the likelihood that injured children would receive compensation from owners in compliance with lead-based paint hazard control requirements. It would dispose of claims quickly and with greater certainty than tort litigation because it is "no fault." An offer of remedial compensation system would avoid the need to determine on an individual basis whether the injured party was harmed by lead-based paint hazards in the rental unit. Under this system, an injured person would be compensated whether the lead poisoning occurred somewhere else (for example, a day care facility or a relative's home) or because the required lead-based paint hazard controls were not protective enough to prevent poisoning. Under this system, children injured in complying units could receive timely medical care and relocation (when medically necessary), minimizing long-term damages from lead poisoning.

The mechanics of the offer of remedial compensation are described in Exhibit 6-1. The owners could offer to pay an EBL child a certain fixed amount, based on a state-established compensation schedule that would cap the maximum award amount. Because the system caps liability and should have relatively low administrative costs, it would encourage rental property owners to comply with lead-based paint requirements. At the same time, in order to encourage injured parties to accept the offer of remedial compensation, any compensation cap established by a jurisdiction must be reasonable.

While EBL children would have the right to reject the offer and litigate, the tort litigation would be unattractive for a number of reasons:

- Statutory liability limits for owners in compliance with applicable requirements would make it difficult for plaintiffs to prevail (see Section 6.5).
- Litigation would take longer.
- Owners might lack insurance to pay any award.

Offers of Remedial Compensation

The purpose of this system is to provide a mechanism for reducing tort litigation between owners of housing in compliance with lead-based paint maintenance and hazard control standards and young children occupying such units who have EBLs. In essence, both owners and occupants would participate in a highly structured settlement effort that would differ from conventional settlement in that it would occur prior to the filing of a lawsuit. Eligible owners and occupants would, however, be able to “opt out” of the system and litigate.

1. For an owner to be eligible to participate in the system, the owner would have to obtain a Certificate of Lead Hazard Status from a licensed or certified risk assessor.
2. For an injured child to be eligible to participate in the system, the child would have to meet established threshold criteria with respect to:
 - a. Length of residence in the unit
 - b. Current blood lead level
 - c. Absence of documented EBL prior to occupancy of the unit
3. Prior to the filing of any lawsuit for lead-based paint claims, injured persons or parents or guardians of a minor child would be required to give the rental property owner written notice of the injury and request that the owner make an offer of remedial compensation.
4. Owners would be required to respond within a specified period of time. Owners could decline to make any offer of remedial compensation. Owners who decline to make an offer, however, would not be able to avail themselves of any statutorily established liability limits or protections from liability.
5. Owners who opt to make an offer of remedial compensation would offer an amount based on a schedule established by state officials. The compensation schedule would be based on factors such as peak blood lead level, length of blood lead elevation, and length of residency in the unit. Offers would cover specified types of remedial compensation defined by state legislation, potentially including uncompensated medical costs, relocation expenses, and remedial education costs. Expenses not yet incurred at the time of the offer could be paid out over time (for example, by purchase of an annuity) or in an initial lump sum.
6. The injured person could accept the offer or reject it. Injured persons who reject an offer, however, would have to litigate in court under liability-limiting rules provided for owners with certificates of lead hazard status.
7. If the offer is accepted, it would be paid either by the owner’s remedial compensation insurance policy or by the owner if the owner self-insures. If an owner fails to make an offer, any remedial compensation insurance would not apply to defense costs or any judgment involved in subsequent litigation. If an injured person rejects an offer and chooses to litigate, any remedial compensation insurance would pay an amount up to the policy limits for the judgment and/or defense costs. (Owners might additionally have conventional third-party liability insurance with higher limits of coverage.)

Owners could either self-insure or purchase some type of “remedial compensation insurance” that would cover payments (up to a specified limit) made by an owner if an offer of remedial compensation is accepted. State adoption of an offer of remedial compensation system should address some insurers’ concerns about lead poisoning liability coverage. Because rental property owners would have to be in compliance with health-protective lead-based paint hazard maintenance and control requirements in order to participate in the offer system, the risk of a child being lead poisoned in a covered unit should be fortuitous. In addition, losses should be more predictable than under a tort negligence system because the offer of remedial compensation system would compensate injured persons on a no-fault basis using a fixed compensation schedule. Accordingly, it should be possible for insurers to develop an insurance product to cover offers of remedial compensation, one which could carry lower premiums than third-party liability insurance covering tort claims for lead poisoning.

The Task Force believes that the availability of some form of affordable insurance product covering offers of remedial compensation would help owners to spread the risks and costs of children becoming poisoned in complying units and thus make the offer system work better. Such a product could either be part of the owner’s regular habitational insurance policy or be a newly developed product covering only offers of remedial compensation. (It is possible that offers of remedial compensation would be considered “claims” covered under existing habitational insurance policies that do not exclude lead poisoning claims; but clarifying policy language would be useful.)

Despite the value of affordable insurance coverage, the Task Force rejected a recommendation that would have called upon state insurance commissioners to require the sale of remedial compensation insurance. Instead, the Task Force is recommending that state insurance regulators work with insurers and insurance service organizations to explore the feasibility

of developing and selling this new product. While it is hoped that such a product could be made available to interested owners, the Task Force is not recommending either that insurers be required to sell remedial compensation insurance or that owners be required to purchase it.

Recommendation 6-8:

Creating State Compensation Systems. The Task Force recommends that state legislatures develop an offer of remedial compensation system, as outlined in Exhibit 6-1, to reduce tort litigation and provide limited remedial compensation for children injured in housing units in compliance with required lead-based paint hazard controls.

Recommendation 6-9:

Remedial Compensation Insurance. The Task Force also recommends that state insurance regulators work with insurers and insurance service organizations to explore ways of providing owners with remedial compensation insurance either as part of coverage under third-party liability insurance policies or through the creation of new insurance riders or products.

Conventional Liability Insurance

States which choose not to adopt an offer of remedial compensation system may alternatively wish to take steps to increase the availability of conventional third-party liability insurance for owners who can document compliance with lead-based paint hazard control requirements.

Before deciding to focus on the offer of remedial compensation approach, the Task Force devoted a significant amount of time to evaluating when state legislatures should act to limit the liability of complying owners and increase the availability of insurance for such owners. The results of this evaluation are summarized in Exhibit 6-2. Affirmative interventions to increase the availability of insurance are appropriate for owners who at least perform Standard Treatments, control lead-based paint hazards identified in a risk assessment, or implement a hazard control plan. To

Potential Approaches for Using Insurance and Liability Mechanisms to Encourage Lead-Based Paint Hazard Control in Pre-1978 Target Rental Housing in Compliance with Applicable Lead-Based Paint Hazard Control Requirements*

	A	B	C	D
Extent of Lead-Based Paint Hazard Control Required	Increase Availability of Insurance for Lead-Based Paint Hazards?	Change Law on Nature and Extent of Tort Liability for Lead-Based Paint Injuries?	Alter Rules or Methods for Compensating Injured Persons?	Create Action for Injunctive Relief to Correct Compliance Failures?
1 No Essential Maintenance Practices or Hazard Controls Required	Not applicable	Not applicable	Not applicable	Not applicable
2 Essential Maintenance Practices (Lower Priority Housing)	No, voluntary market should determine insurance demand and supply	No, cases should be decided in court based on facts and circumstances	Tort law is primary compensation mechanism; establish alternative system where owner is unable to pay tort judgment	Yes
3 Standard Treatments	Yes, structured to provide insurance at affordable premiums and incentives for continued or additional hazard control where appropriate	Clarify or limit liability in return for compliance with Standard Treatment requirements	Establish alternative for children poisoned despite regulatory compliance	Yes
4 Controls Are Being Implemented According to a Lead Hazard Control Plan	Yes, for buildings in compliance with approved plan structured to provide incentives to follow or exceed plan requirements	Clarify or limit liability in return for compliance with risk assessment/hazard control plans that meet regulatory requirements	Establish alternative for children poisoned despite plan compliance	Yes
5 Lead-Based Paint Hazard Abatement	Yes, structured to provide insurance at affordable premiums and incentives for continued or additional hazard control where appropriate	Clarify or limit liability in return for compliance with abatement requirements	Establish alternative for children poisoned despite regulatory compliance	Yes
6 Lead Free	Yes, but should be provided through voluntary market mechanisms if possible	Clarify or limit liability by providing owners with a complete defense	Not applicable	Not applicable

* For purposes of insurance and liability relief, the Task Force assumes clearance dust testing has been done and a Certificate of Lead Hazard status has been issued by a certified risk assessor or other appropriate party.

obtain this insurance, owners would have to non-fraudulently obtain a Certificate of Lead Hazard Status from a certified risk assessor.

States can use a variety of mechanisms to increase the availability of third-party liability insurance for complying owners. In all cases, the insurance coverage should be structured to provide coverage at affordable premiums and incentives for owners to perform continued or additional hazard control (where appropriate). Options for increasing insurance availability include having insurance regulators or state legislatures:

- Require coverage of lead-based paint claims to the same extent as other liability claims in comprehensive general liability and Owner-Landlord-Tenant policies for units where all lead-based paint hazards have been abated.
- Prohibit complete exclusion of lead-based paint claims from these policies for units where hazard controls have been performed, but establish higher deductibles or lower limits of coverage for lead-based paint claims to induce owners to consider additional control actions.
- Set premiums for policies covering lead-based paint claims in complying units based on projected claims experience (given controls and liability limits) to ensure affordable premiums.

Recommendation 6-10:

Increasing Availability of Insurance. The Task Force recommends that states that do not establish “offers of remedial compensation” systems for owners who document compliance with health-protective standards of lead-based paint hazard control should adopt legislation designed to increase the availability of affordable insurance coverage against lead-based paint claims for such owners and to reduce the amount of tort litigation.

6.7 IMPLEMENTING LIABILITY AND INSURANCE CHANGES

Implementing the changes in the liability and insurance systems being recommended by the Task Force will require some further changes, particularly in the manner in which owners document their compliance with standards of lead-based paint maintenance and

hazard control to be able to qualify for liability limitations and access to the offer of remedial compensation system. The recommendations that follow address the establishment of a “certificate” system for documenting compliance, as well as the legal admissibility of dust testing results. The final recommendation in this section addresses the potential of alternative dispute resolution mechanisms to reduce the high transaction costs of lead-based paint litigation.

Certificate Systems

Rental property owners who undertake hazard control activities to obtain liability limitations as suggested in Recommendation 6-7 generally will need to obtain independent documentation that their units qualify for such limitations. To address this need, states could establish a system of Certificates of Lead Hazard Status.

- A certificate would be a short document that would be issued only by an independent certified inspector or risk assessor based on an on-site evaluation, including both a visual examination and dust tests.
- Certificates would document that a particular unit (or multifamily property) had been found to comply with certain established standards of lead-based paint maintenance and hazard control as of the date of the evaluation.
- The certificate would not guarantee that a unit remains safe from lead hazards; it simply provides documentation of the unit’s condition as of the date of the evaluation.

Certificates should be available for owners to obtain, at their option, based on the specifics of their situation.

The Task Force envisions at least three different certificates with different durations based on the future likelihood of lead hazards developing:

- A **Certificate of Lead-Free Status** would document, based on a lead-based paint inspection, that a unit does not contain lead-based paint. Such a certificate would be good for an indefinite period. Under Recommendation 6-6, this certificate would help a property owner demonstrate a complete defense to liability.

- A **Certificate of Abatement** would document that all lead-based paint hazards have been abated and dust standards met. Such a certificate could have a lengthy duration, perhaps ten years, but not an indefinite duration, since intact lead-based paint remaining in the unit could deteriorate and create a hazard. This certificate would help property owners demonstrate their qualifications for the liability limits under the offer of remedial compensation system or other alternate compensation systems that limit liability for rental property owners. See Recommendations 6-7 and 6-8.
- A **Certificate of Lead Hazard Control** would document that a risk assessor found that the owner of a unit containing some lead-based paint hazards has met the applicable lead-based paint maintenance and hazard control standards as of the date of the risk assessment. The standard duration of a Certificate of Lead Hazard Control would be relatively short, perhaps one or two years. Under Recommendations 6-7 and 6-8, this certificate would help property owners demonstrate their qualifications for liability limits.

The duration of each certificate would be based on a schedule established by the state. (The Task Force has not established a specific schedule for the duration of these certificates, as the duration periods need to be based on data on lead dust reaccumulation rates and revised periodically based on ongoing research.) Having an established schedule for the duration of certificates avoids giving risk assessors unbounded discretion, which would inevitably result in inconsistencies and probably make it difficult for risk assessors to secure liability insurance. Risk assessors should have authority to reduce (but not increase) the standard duration period if conditions are documented that indicate the control measures may not be effective for the standard period.

Recommendation 6-11:

Establishing Certificate Systems. The Task Force recommends that states that grant liability relief to owners of properties in compliance with lead-based paint

maintenance and hazard control standards establish systems for the issuance of Certificates of Lead Hazard Status of specified duration.

Admissibility of Dust Testing

The standards of lead-based paint hazard control in Chapter 3 provide that owners who perform Standard Treatments must perform sufficient dust testing to provide a reasonable assurance of compliance. For purposes of completing Standard Treatments, this dust testing can be performed either by a certified risk assessor or by the owner or owner's employees.

However, such dust testing may not be reliable enough to serve as judicially admissible evidence of the status of lead-contaminated dust in the unit. Untrained personnel may fail to follow proper collection procedures or otherwise obtain unreliable results. While the Task Force wanted to give owners the option of self-testing in order to lower costs, concern was expressed that the results of any such self-testing should not be admissible in any subsequent judicial proceedings. Part of this concern was that owners who knew that self-testing results would be used in court would not take the voluntary but desirable step of obtaining documentation of compliance sufficient to qualify for liability limitations. The Task Force accordingly decided that only dust testing results obtained by certified risk assessors should be admissible in court actions.

Recommendation 6-12:

Clarifying Admissibility of Dust Testing. The Task Force recommends that states statutorily establish that only dust tests performed by a certified inspector or risk assessor be admissible in court actions.

Alternative Dispute Resolution

Courts around the country are increasingly using alternative dispute resolution methods to expedite resolution of complicated lawsuits and legal matters and to provide litigating parties with the opportunity to arrive at mutually agreeable solutions without using scarce judicial resources. Task Force discussions

focused on the use of nonbinding methods, such as mediation or nonbinding arbitration. The Task Force also decided that while it was appropriate to encourage courts to offer such alternative dispute resolution options to lead-based paint litigants, it would not be appropriate to require their use in all cases.

The Task Force is therefore recommending that courts make mediation or nonbinding arbitration available in two types of lead-based paint court actions. Recommendation 6-3 provides for dispute resolution when tenants bring an action for injunctive relief. The recommendation that follows applies more broadly to any tort litigation over lead-based paint claims.

Recommendation 6-13:

Encouraging Alternative Dispute Resolution. The Task Force recommends that states take steps to decrease the amount and cost of tort litigation over lead-based paint claims by enacting legislation requiring courts to offer mediation or non-binding arbitration to resolve such actions whenever possible.

6.8 CONTRACTOR LIABILITY INSURANCE AND BONDING

While the Task Force's deliberations focused primarily on liability and insurance concerns of rental property owners, there was some consideration of the liability insurance and bonding issues facing contractors. The availability of affordable contractor liability insurance coverage and bonding is important to efforts to promote proper evaluation and control of lead-based paint hazards. Contractors may choose not to undertake lead-based paint hazard evaluation and control work if they cannot obtain affordable insurance and surety bonding coverage. Property owners may also be unwilling to hire contractors lacking insurance or bonding. Thus, limitations in the availability of insurance and bonds may restrict the growth of the hazard evaluation and control industry and thereby hamper efforts to prevent childhood lead poisoning.

The availability of liability insurance for lead-based paint related activities presently is limited but growing. The supply is limited, in part, because the lead-based paint hazard evaluation and control industry itself is relatively new and lacks accepted work standards. As a result, liability coverage is currently available only with stringent underwriting qualifications, limited and varying policy terms and conditions, and high minimum premiums.

The market for liability insurance should continue to expand for several reasons. The risk of contractor liability should decline with increased contractor experience; the development of standard work practices including dust testing; the promulgation of training, certification, and other federal and state regulatory requirements; and improvements in the safety, reliability, and effectiveness of hazard evaluation and control techniques. As the demand for insurance increases with the growth of the lead-based paint hazard evaluation and control industry and as knowledge about childhood lead poisoning increases, insurance underwriters will gain an improved understanding of the industry and its risks. With improved knowledge, insurers will be better able to distinguish among low-risk and high-risk contractors and set appropriate underwriting standards and premiums.

In addition to seeking liability insurance, lead-based paint hazard evaluation and control contractors, like other contractors, may be required to obtain surety bonds, particularly in public sector jobs. The purpose of the bonds is to protect the entity who hired the contractor from being left with incomplete work or to ensure that certain subcontractors and material suppliers are paid. Surety bonds generally guarantee that, in the event the contractor cannot complete the job, for example, because of a lack of financial resources, the surety company issuing the bond will take over responsibility for completing the job (a performance bond) or will pay certain unpaid subcontractors and suppliers (a "payment" bond). Bonds do not cover the contractor's liability for personal injuries or property damage arising from the work on a project.

Limitations on the availability of bonding or liability insurance are not likely to restrict the ability of large and/or experienced contractors to perform lead-based paint hazard evaluation and control work. They can demonstrate the expertise, financial stability, and satisfactory work record required by surety companies to obtain bonds. As the insurance market expands, large contractors will also be able to obtain liability insurance coverage. They have both the financial resources to pay the substantial minimum premiums and deductibles required by liability insurers and the large volume of business across which to spread the cost. Thus, the Task Force is making no recommendations on insurance or bonding for large and/or experienced contractors.

In contrast, small contractors, particularly non-construction contractors that are new to the lead-based paint hazard evaluation and control business, such as community groups that seek to participate in ongoing control work, are likely to have difficulty obtaining bonding. Surety companies are hesitant to issue bonds if the contractor has not demonstrated expertise or qualifications for lead-based paint hazard evaluation and control projects or sureties have questions about the contractor's financial strength. Demonstrating expertise and financial strength is particularly difficult for nonprofit and community-based organizations that are just beginning to undertake lead-based paint hazard control work and have not been involved in similar activities in the past. Small contractors and community groups are also likely to have difficulty affording the high minimum premiums and deductibles required to obtain liability insurance, even in an expanded insurance market.

The Task Force recommends several potential ways to improve the ability of small contractors and community groups in neighborhoods with high concentrations of higher-priority housing to participate in lead-based paint hazard evaluation and control projects. Federal and state agencies could use subcontractor set-asides to encourage joint ventures among large established firms or smaller companies and community groups. Such set-asides would require larger firms to hire smaller firms or community groups as subcontractors to qualify for the work. Through such joint ventures, the smaller or community group entities would not need to obtain surety bonds. These entities also might acquire the expertise and possibly the financial stability necessary to obtain surety bonds in the future. Federal or state agencies could waive bonding requirements to small contractors or community groups or structure projects to avoid the requirements. In addition, governments could award grants to assist small firms and community groups to enter the hazard evaluation and control industry. These grants could be used to finance liability insurance coverage.

Recommendation 6-14:

Improving Small Contractors and Community Group Participation in Lead-Based Paint Hazard Evaluation and Control Activities. Federal and state agencies should consider methods to increase the ability of small firms and community groups to obtain lead-based paint hazard evaluation and control contracts including:

- *Set asides;*
- *Waivers of bonding requirements for small or community-based contractors; and*
- *Grants to assist in startup, including liability insurance coverage.*

Matching Units with Households

The Task Force supports the broad strategy of matching units that do not pose lead hazards and households with a young child or a pregnant woman. Because only about one in five families has a young child, appropriate matching could help protect all children from lead-based paint hazards long before lead hazard evaluation and controls are implemented across the full housing stock. Matching, therefore, offers a practical and cost-effective means to increase the impact that other strategies have on the health of the nation's children.

- Matching increases the efficiency of the national approach to controlling lead-based paint hazards by ensuring that maximum public health benefits are realized from investments in lead hazard control.
- Matching provides an immediate opportunity for families with a young child to live in housing that does not contain lead-based paint hazards.
- Matching allows owners of multifamily properties who have implemented Lead Hazard Control Plans to offer suitable units to households that need them.

7.1 MATCHING AND UNIT SAFETY

Matching strategies will benefit any family with a young child or a pregnant woman. While the Task Force does not contemplate limiting matching strategies to families with an EBL child, such families are, by definition, at highest risk and deserve priority attention.

Careful attention must be given to the selection of units for matching with families in need. When families are consciously being placed in or relocated to a unit, it is imperative that the unit not contain lead-based paint hazards. The Task Force therefore believes that units suitable for matching (“suitable units”) must meet established standards of hazard control, as

described in Chapter 3. Suitable units include units built after 1978 and pre-1978 units that have valid documentation of compliance with established standards.

The Task Force proposes three complementary strategies to advance the matching objective:

- Efforts aimed at the household, including education, real estate notification and disclosure, and housing counseling;
- Efforts aimed at and undertaken by housing providers, including Lead Hazard Control Plans, relocation assistance, targeted public subsidies, and revised preference policies; and
- The creation of local registries that list suitable units.

7.2 MATCHING STRATEGIES AND HOUSEHOLDS

An effective matching strategy must actively involve households in the search for suitable housing and give them the tools they need to make informed decisions about their housing. The Task Force proposes three areas where current activities can be expanded to increase the availability of information about lead-based paint hazards.

Education

Any initiative to prevent lead poisoning must involve consumer education. Households select their housing units by weighing a wide variety of factors, including the cost, size, quality, and location of the unit. By informing families about potential lead-based paint hazards, education initiatives can encourage families with a young child or a pregnant woman to add the absence of lead-based paint hazards to the list of factors to consider in making housing choices.

Even with information about lead-based paint

hazards, many families may have difficulty finding a unit without hazards. In some communities, units free from lead-based paint hazards may be scarce. Other families may have such limited financial resources that few options are open to them. Nonetheless, when a family is presented with several viable housing options, some of which have lead-based paint hazards, the family will be more likely to select a unit that does not contain lead-based paint hazards if appropriate education has taken place. Chapter 10 describes the Task Force's recommendations for educating consumers about the importance of selecting housing in which lead-based paint hazards are not present.

Real Estate Notification and Disclosure

Another tool that will help consumers make informed housing choices is the Title X requirement that sellers and rental property owners notify potential purchasers or renters about the presence of any known lead-based paint or lead-based paint hazards in the property. Consumers, though, are far more likely to respond to a specific known hazard or potential hazard than to a generic warning about the dangers of lead-based paint.

While Title X and many state laws require property owners to provide this information, homebuyers and renters can easily overlook the significance of such a disclosure amid the myriad papers that are typically involved in a real estate transaction. By making homebuyers and renters aware of the significance of such disclosures, housing counselors, real estate agents, nonprofit service providers, and others can raise consumer awareness and help families make better decisions about their housing. Professionals who counsel and work with homebuyers can also help purchasers understand the value of obtaining a risk assessment or lead-based paint inspection.

Housing Counseling

Housing counseling agencies offer a range of services to homebuyers and renters. Many counseling programs teach potential homebuyers about the opportunities for and responsibilities of homeownership. Other programs teach skills that help renters become homeowners. These counseling activities, with their emphasis on consumer awareness and housing choice, are an ideal vehicle for informing households with a young child or

a pregnant woman about lead-based paint hazards and encouraging them to seek suitable housing. In addition, counselors may be in a position to help clients locate units without lead-based paint hazards.

HUD, Fannie Mae, and Freddie Mac are active supporters of housing counseling efforts. The Task Force recommends that these organizations, because of their national scope and influence in housing markets, develop training programs for housing counselors on the hazards of lead-based paint, including strategies for matching families with hazard-controlled units. Developing the capacity within existing organizations to provide information about the hazards of lead-based paint is a cost-effective way to reach consumers at a point when they are making crucial decisions about their housing.

Recommendation 7-1:

Training Counselors to Promote Matching. Key actors in the housing field, such as HUD, Fannie Mae, and Freddie Mac, should advance matching strategies by developing and supporting initiatives to train counselors to help tenants and homebuyers understand the hazards of lead-based paint and to assist them in locating suitable units.

7.3 MATCHING STRATEGIES AND HOUSING PROVIDERS

The Task Force also recommends a series of actions to encourage housing providers to advance the objective of matching families with a young child or a pregnant woman to suitable units.

Lead Hazard Control Plans

As described in Chapter 3, Lead Hazard Control Plans take a strategic, property-wide approach to addressing lead-based paint hazards. Under a Lead Hazard Control Plan, developed by an independent certified risk assessor, a property owner performs lead hazard evaluation and control activities in a subset of units, that are then available to match with households with children. It is the property owner's responsibility to attempt to match units that receive lead hazard evaluation and controls early in the process to families who need the units.

Relocation Assistance

While families may be aware of lead-based paint hazards in their units, some cannot afford the costs of moving. Of particular concern are families with an EBL child who cannot afford to relocate. The benchmark standards in Chapter 3 call for property owners to pay for relocation of families with an EBL child from units with hazards that are not promptly controlled. However, if the property owner cannot or will not relocate a family, federal and other housing funds can be marshalled to provide needed resources.

State and local governments can draw on several funding sources to pay for relocation. Some federal resources, like the Community Development Block Grant (CDBG) program, already permit the use of funds for relocation. Localities can modify the design of their current programs to take advantage of these funds.

Other potential sources of relocation funds may require federal action to make them available for this special purpose. For example, programs like HOME would need to be modified to make lead-based paint hazard related moves into eligible activities.

Recommendation 7-2:

Relocating Children with EBLs Using Federal Funds. The Task Force recommends that HUD make the relocation of EBL children an explicitly eligible activity under its housing programs and that state and local governments use their federal block grants and other available housing funds to provide relocation assistance to households with an EBL child.

Targeting Public Subsidies

When public subsidies are used for lead hazard control, it makes sense to target those investments toward children to realize the greatest possible health benefits. In Chapter 5, the Task Force recommends that preference be given to families with a young child or a pregnant woman when public subsidies are provided for lead hazard control in rental units. Similarly, subsidies for lead hazard controls in owner-occupied units should be targeted to such households.

Recommendation 7-3:

Preferences for Households That Need Suitable Units. The Task Force recommends that HUD establish criteria to ensure that public subsidies for lead hazard con-

trol be targeted to families with a young child or a pregnant woman, or that units that receive such subsidies be matched with families in need of suitable housing.

Preference Policies

In Chapter 8, the Task Force recommends that families with an EBL child be given preference on waiting lists maintained for tenant-based assistance programs. In addition to meeting these families' critical housing needs, Recommendation 8-3 also helps match families with suitable units.

Care must be taken to structure preference policies in accordance with fair housing laws. Generally, fair housing laws prohibit the use of preferences that limit the opportunities for persons in a protected class. Giving a preference to households with an EBL child could be viewed as discrimination against the larger protected class of families with children. However, such a preference could alternatively be viewed as a way to address children with special needs. For example, people with disabilities represent a protected class. Within this class are people who use wheelchairs. It is permissible under fair housing laws to construct housing that is wheelchair accessible and then give occupancy preference to people who use wheelchairs.

To establish the need for a preference, communities must demonstrate that a group has unmet needs and that the preference is needed to narrow the gap in benefits and services received by this group. In the case of lead, communities can document, in their housing strategy or comprehensive plan, that the number of units that meet established standards of hazard safety, as well as appropriate size, condition, and affordability, are insufficient to meet the special health needs of a family with a young child or a pregnant woman.

The complexity inherent in establishing a preference is likely to raise many questions in local communities. To address the complexity of fair housing laws and the potential for unacceptable preference policies, HUD should create a model preference policy. Such a policy would support matching goals in a manner consistent with fair housing laws and facilitate local communities' adoption of preference policies.

Recommendation 7-4:

Developing a Model Preference Policy. The Task Force recommends that HUD develop a model preference policy that accomplishes matching objectives and is consistent with fair housing laws.

7.4 MAINTAINING REGISTRIES OF SUITABLE RENTAL UNITS

Implicit in the preceding recommendations is a need for accurate information about the availability of suitable housing units. When informed households seek safe housing, they need reliable information on the lead hazard status of available units. Similarly, when housing providers have hazard-controlled units available, they may benefit from outside help in identifying families with young children in need of suitable units.

Local housing and public health agencies can help link these groups by creating registries of rental units that meet established standards of hazard control. These registries would provide data on the lead status of units to consumers, housing counselors, public health nurses, social workers, real estate agents, and others who assist renters and potential homebuyers in selecting rental units and purchasing homes. Agencies maintaining registries could also perform dust tests and other evaluations to help ascertain the status of a unit and to expand the list of suitable units.

Creating a Registry

A registry would require an initial investment in time and research. However, once established, it would be relatively simple to maintain. It would include, at a minimum, information on each unit's address, size, amenities, and lead hazard status. Information on rents and availability would be more difficult to keep current, but might be accomplished by linking registries with real estate and city planning databases.

Since conditions in pre-1978 units may change over time, care must be taken to ensure that valid documentation of compliance remains in effect. Registries could include information about when the lead status determination was made and the expiration date. If the registry is widely publicized, owners of units with valid compliance documentation might voluntarily list their properties to reach a large market of potential occupants.

Recommendation 7-5:

Developing Registries. The Task Force recommends that local housing or public health agencies develop and maintain registries of available post-1978 units and of pre-1978 units with valid documentation of compliance with standards of lead hazard control.

Linking Registries to Other Local Resources

Registries will function most effectively if they are current and actively used by housing professionals, including real estate agents, lenders, code enforcement officials, and others who work closely with households looking for suitable units. Housing professionals should be encouraged to identify units to include on such registries. At the same time, registry administrators should actively market their listings and encourage housing providers to use them.

Recommendation 7-6:

Networking of Registries and Housing Providers. The Task Force recommends that, in designing and operating registries, state and local housing/health agencies establish working relationships with housing counselors, lenders, real estate agents, code enforcers, and other actors in the housing market to facilitate the two-way flow of information regarding the availability of units that meet minimum standards of lead safety.

The registry concept requires further development. Questions remain about how best to structure registries, how to keep them updated, how to link them with the appropriate organizations, and how best to disseminate accurate and useful information to those who need it. HUD's various housing grant programs and technical assistance resources provide an opportunity to develop model registries and test various methods of matching households to units that do not contain lead-based paint hazards. HUD should make matching an integral element of its housing rehabilitation and lead abatement grants program and encourage local programs to explore new ideas for implementing matching strategies.

Tenant-Based Assistance Programs

Tenant-based assistance programs provide public funds for a portion of the rent for low-income tenants living in privately owned housing. Unlike project-based rent subsidies, which are tied to specific properties, tenant-based assistance subsidies can be used by a tenant in any acceptable unit and can “move” with the tenant. Because tenant-based assistance programs do not tie subsidies to particular units, such programs are excluded from coverage under the Title X requirements for federally supported housing. Nonetheless, these programs present the opportunity to set standards that can help increase the supply of privately owned units that are free of lead-based paint hazards. In addition, since tenant-based assistance units are occupied primarily by families, changes in these programs can affect a large number of young children.

The Section 8 Existing Housing Program, which provides rental assistance to nearly 1.5 million households through its Certificate and Voucher programs, is the largest tenant-based assistance program. Smaller tenant-based assistance programs are supported through the federally funded HOME program and by state and local governments. HOME rules for tenant-based assistance programs largely mirror the minimum requirements of the Section 8 Existing Housing Program, although they allow the state or local housing agency more flexibility in program design. State and local tenant-based assistance programs also tend to follow these basic guidelines. Recent Administration proposals for reinventing HUD rely heavily on tenant-based assistance programs to provide affordable housing to low-income households.

Most tenant-based assistance programs serve renters with incomes at or below 80 percent of area median, and many target their resources to even lower income groups. For example, the Section 8 Existing Housing Program is targeted to very low income renters with incomes at or below 50 percent of area median income. The tenant-based assistance rental process is similar to other private rental transactions. Tenants select privately owned units and sign leases with owners. But participating tenants pay only an affordable portion of the rent each month. Owners receive the balance of the rent from a state or local housing agency that administers the tenant-based assistance program. The owner’s relationship with the state or local housing agency generally is set forth in a housing assistance contract. Tenants, within the normal constraints of a lease, are free to move and take the rental subsidy with them.

Tenant-based assistance programs are generally designed to provide eligible households with modest, but decent, safe, and sanitary housing. To ensure this result, most programs impose minimum standards for unit size and condition and upper limits on the amount of rent that the government will pay. Most tenant-based assistance programs require that:

- Approved rents pass a “reasonableness test” when compared with comparable units in the local housing market. The subsidy is further controlled by other government limits.¹
- Before any subsidy can be paid, units must meet minimum standards for physical condition. Units also must pass annual physical re-inspections. State or local housing agencies typically conduct the inspections.

Lead-based paint requirements must recognize the implications of the unique design of tenant-based assistance programs. While the subsidy may serve as an incentive to encourage owners to improve lead-based paint hazard control, the pockets of most programs are not deep. The modest subsidy will not support significant lead-based paint hazard control activities. Further, imposing stringent requirements could have the unintended effect of discouraging owners from participating in tenant-based assistance programs.

The Task Force considered three key changes affecting tenant-based assistance programs: (1) improving standards for physical condition related to lead-based paint, (2) revising program regulations to encourage state and local housing agencies to pay a premium to make available units without lead-based paint hazards, and (3) revising program procedures to permit prompt and appropriate responses when EBL children are identified. The Task Force also identified several administrative and procedural strategies to support the implementation of its recommended changes in these areas.

8.1 REVISIONS TO TENANT-BASED ASSISTANCE STANDARDS FOR PHYSICAL CONDITION

Current Housing Quality Standards (HQS)² in the Section 8 Existing Housing Program contain minimum requirements related to lead-based paint hazards. Presently, property owners must:

- Correct defective paint in units occupied by children under the age of seven; and
- In units occupied by a child under the age of seven who has an EBL, test chewable surfaces and, if lead-based paint is found, cover or remove lead-based paint from chewable surfaces.

Similar standards have been adopted by most state and local programs. Although the primary pathway of childhood lead poisoning arises from ingesting lead-contaminated dust, the current standards for physical

condition, introduced into regulations prior to Title X, focus exclusively on defective paint, with no standards for dust testing or specialized cleaning³. Even when a child with an EBL is identified, the current required response focuses on paint stabilization of chewable surfaces.

The Task Force recommends that new guidelines for lead-based paint hazard evaluation and control that parallel the benchmark standards described in Chapter 3 be incorporated into tenant-based assistance standards for physical condition to reflect more up-to-date knowledge about how to address lead-based paint hazards. Elsewhere in this report, the Task Force has recommended that state and local governments incorporate into housing codes lead-based paint maintenance and hazard control standards that would apply to pre-1978 housing. Making revisions to standards for physical condition for tenant-based assistance programs presents the opportunity to apply these standards to a portion of the private housing stock that eventually would be covered by such codes, even before state and local governments incorporate lead-based paint maintenance and hazard control standards in law and regulation. These changes in the standards for physical condition required for tenant-based assistance programs can help gain more general acceptance of the lead-based paint maintenance and hazard control standards.

The recommendations proposed in this section are not intended to put state and local housing agencies in the position of representing to occupants that any particular unit contains no lead-based paint hazards. Rather, they allow the agency to verify that the unit has complied with certain standards for lead-based paint maintenance and hazard control. Further, the recommendations are not intended to impose undue burden on agencies that administer tenant-based assistance programs. The recommendations are designed to minimize costs and to be implemented using existing inspection and management systems.

The Task Force recognizes that, in the short run, and before the lead-based paint maintenance and hazard control standards are widely adopted, more strin-

gent standards for physical condition could reduce the number of property owners willing to rent to tenant-based assistance recipients in some housing markets. Because rents for most tenant-based assistance units are modest, not all owners are able or willing to spend rental income to comply with lead-based paint standards. Further, since the rental assistance provided under tenant-based assistance programs moves with the tenant, owners cannot rely on it for an income stream to support long-term investments. Federal, state, and local governments are urged to sensitively implement and phase in the proposed standards of lead-based paint evaluation and hazard control for tenant-based assistance programs so that property owners continue to participate in programs.

Recommendation 8-1:

Include the Recommended Lead-Based Paint Hazard Control Standards in Tenant-Based Assistance Standards for Physical Condition. The Task Force recommends that agencies that operate tenant-based assistance programs incorporate standards for physical condition that parallel the lead-based paint hazard control standards proposed by this Task Force, including requiring more stringent standards for higher priority units and sufficient dust testing to provide reasonable assurance that post-treatment cleaning has effectively removed any lead dust hazards.

8.2 MEASURES TO ASSIST EBL CHILDREN

Strengthening lead-based paint standards for physical condition in tenant-based assistance programs and in other privately owned housing will help prevent lead poisoning. However, for those children who do become poisoned, additional measures must be taken. Accordingly, the Task Force recommends revising tenant-based assistance regulations and operating procedures to parallel the benchmark standards described in Chapter 3 and to ensure prompt action when an EBL child is identified.

Response When an EBL Child Is Identified in an Assisted Unit

In many jurisdictions, the identification of an EBL child triggers an investigation by local health officials to identify the source of the lead exposure. This investigation can include an assessment of the unit in which the household lives. The Task Force recommends that the standards for physical condition in tenant-based assistance programs require that when an EBL child is identified:

- The owner conduct a risk assessment unless the local government has recently evaluated the unit or the unit is covered by a valid documentation of compliance as issued by an independent, certified individual.
- The owner provide written notice to the tenant of the results of the risk assessment and any control actions to be taken.
- The owner control any lead-based paint hazard identified by the risk assessment within 30 days and conduct post-intervention dust testing.

If the owner does not act promptly to control identified hazards, tenant-based assistance programs should require that the household be relocated, at the owner's expense, to a comparable unit free of lead-based paint hazards.

Recommendation 8-2:

Requiring Owner Action When an EBL Child Is Identified in an Assisted Unit. The Task Force recommends that, for tenant-based assistance units occupied by an EBL child, administering agencies develop program standards that require a risk assessment, prompt correction of identified hazards, and a written notice to the tenant; alternatively, tenant-based assistance programs could permit the owner to relocate the household to a comparable unit free of lead-based paint hazards.

Priority for EBL Families on the Waiting List

To ensure the effective use of public resources, the Federal Government has established, by legislation, a preference system that state and local housing agencies

must use when selecting tenants for federally assisted tenant-based assistance programs. State and locally funded programs usually have similar preference systems. Local preferences, established by the state and local housing agency, may be used in conjunction with the federal preferences. Currently, state and local housing agencies must give preference to households that are living in substandard housing (including the homeless), paying more than 50 percent of their income for housing, or involuntarily displaced (including victims of domestic violence).

In most communities, the need for affordable housing is great. Placement on a tenant-based assistance waiting list may be followed by months or even years of waiting before assistance becomes available. When an EBL child is identified, prompt action should be taken to enable the household to occupy a unit that does not contain lead-based paint hazards.

The Task Force recommends that state and local housing agencies that administer tenant-based assistance programs be encouraged to establish tenant selection procedures that provide a specific and high preference for households that include an EBL child. Tenant-based assistance programs also could offer preferences to pregnant women who are exposed to hazards that are harmful to them or their fetuses. For example, families who have a child with an EBL reading at or above 20 µg/dL or two consecutive EBL readings of between 15 and 20 µg/dL could be given priority for tenant-based assistance. Similarly, within the federal preference framework, households with an EBL child or a pregnant woman exposed to harmful lead-based paint hazards could be considered involuntarily displaced and therefore moved to the top of waiting lists for tenant-based assistance.

Recommendation 8-3:

Providing Preferences for Households on the Waiting List with an EBL Child. The Task Force recommends that agencies that operate tenant-based assistance programs revise their tenant selection procedures to provide a specific and high priority for any household on the waiting list that has a child with an EBL.

8.3 IMPROVING ACCESS TO HAZARD-CONTROLLED HOUSING BY LOWER INCOME HOUSEHOLDS

Chapter 5 describes in detail the challenges and opportunities that exist in funding lead hazard control activities. While the Task Force believes that the answer to this problem lies primarily outside the resources available through tenant-based assistance programs, two Task Force recommendations regarding the supply of such housing relate directly to tenant-based assistance.

Providing Financial Incentives for Owners of Housing Free from Lead-Based Paint Hazards

In most housing markets, rents do not reflect additional value in housing that does not contain lead-based paint hazards. Rather, the market is driven by considerations such as size, location, and amenities. By modifying tenant-based assistance programs to recognize the value of this housing, federal, state, and local governments could stimulate the private housing market to recognize its value and increase the supply of good quality housing free of lead-based paint hazards. Providing financial incentives for hazard-free units would increase interest in tenant-based assistance programs among owners of such housing, thereby expanding the available supply of housing. In some markets, the prospect of an increased rent would encourage some owners to undertake hazard control measures in order to participate in the tenant-based assistance program. Over time, the private housing market would begin to recognize the value of such housing, stimulating other owners to make their units safe from lead-based paint hazards whether or not they participate in a tenant-based assistance program.

For programs such as the Section 8 Existing Housing Program that establish maximum rents based on rent reasonableness, the appropriate agency should establish procedures that permit approval of “incentive rents” higher than the rent reasonableness test would typically indicate for units that are demonstrated to be free from lead-based paint hazards. Owners could qualify units by providing documentation of compliance or by virtue of the unit’s status as a post-1978 unit.

The amount of the rent premium should vary by housing market and should be as low as possible, while still providing assistance to households with a young child, a pregnant woman, or an EBL child. Before using this authority, housing agencies should verify that a rent premium is needed to ensure the availability of hazard-controlled units to these households. In addition, housing agencies should ensure that allowed rent increases do not impose undue rent burdens on low-income tenants. Agencies that administer tenant-based assistance programs could establish a maximum premium (for example, 20 percent above the reasonable rent) and permit local decisionmakers to approve incentives up to the maximum.

Recommendation 8-4:

Allowing Local Discretion over Maximum Allowable Rents. The Task Force recommends that state and local housing agencies be permitted to increase the allowable rents for units free of lead-based paint hazards in order to encourage hazard control and to increase the availability of hazard-controlled units to tenants.

Providing Tenant-Based Assistance Participants with Access to Federally Financed Hazard-Controlled Units

Owners of privately owned housing are not required to accept applicants subsidized through a tenant-based assistance program. However, to increase the availability of hazard-controlled units to families who need them, HUD should require that private owners who receive federally appropriated housing funds to control lead-based paint hazards agree to accept tenant-based assistance participants who otherwise meet the owner's screening criteria. In addition, these owners should be required to place their units on registries of units that meet minimum standards of lead hazard control (see discussion of registries in Chapter 7). Providing information about the availability of hazard-controlled units will help tenant-based assistance program participants, particularly those with an EBL child, a child under the age of six, or a pregnant woman, choose appropriate housing.

Recommendation 8-5:

Requiring Rental Property Owners Who Receive Federal Funds for Lead Hazard Control to Facilitate Occupancy by Tenant-Based Assistance Participants. The Task Force recommends that HUD require that private rental property owners receiving federally appropriated housing funds to control lead-based paint hazards agree to accept tenant-based assistance participants who otherwise meet the owner's criteria and to include the unit on registries assisting tenant-based assistance households interested in locating safe units.

8.4 IMPLEMENTATION STRATEGIES

Program Streamlining and Quality Improvement

To make the revisions in lead-based paint policy as effective as possible, HUD and state and local housing agencies should continue seeking to improve efficiency in the administration and operation of the nation's tenant-based assistance programs. In particular, HUD and state and local housing agencies should revise operating policies and procedures to reduce processing time and streamline operations without sacrificing quality. Improved efficiency in areas such as processing time and timeliness of rent payments will encourage participation by more owners, particularly owners of newer units without lead-based paint hazards. HUD and other agencies that administer tenant-based assistance programs should also consider, as part of an overall review of administrative fees, whether the responsibilities imposed by revised standards for physical condition, preference, and rent determination policies require adjustments to the administrative fee structure.

The Need for Education and Training

The Task Force recommendations impose a variety of new responsibilities on state and local housing agencies. Chapter 10 of this report discusses the need for general education on lead-based paint issues and recommends a broad-based public education campaign.

The recommendations made by the Task Force in this chapter also suggest the need for specific additional education and training for the staff of the agencies involved in implementing the proposed changes.

To be effective, the proposed changes in standards for physical condition must be well enforced. While standards for physical condition inspections and re-inspections are currently required for most tenant-based assistance programs, not all state and local housing agencies perform them well. HUD works with state and local housing agencies that administer the Section 8 Existing Housing Program to improve inspection procedures through training, monitoring, and sanctions. The Task Force suggests that HUD design and implement a training program to help state and local housing agency inspectors understand the new requirements, learn new inspection procedures, and qualify to conduct dust testing. Similarly, training and materials should be provided to property owners.

In addition, HUD should offer training that would enable state and local housing agency intake and leasing staff to provide better counseling with respect to the hazards of lead-based paint. Through its resident initiative programs and other activities, HUD should make resources and training available to allow agency staff to better inform tenants about the standards of hazard control and the obligations of property owners with respect to lead-based paint. This training would ultimately enable tenants to participate more fully in monitoring compliance with the hazard control standards.

A final area of needed state and local housing agency training relates to rent determinations. Although state and local housing agencies currently make rent reasonableness determinations, not all do it well. Many rely on Payment Standard or Fair Market Rent limitations to establish the rents, rather than on information about the local market area and the particular unit being considered. Training in this area is vital, particularly given the Task Force's recommendation that incentive rents be used to promote the availability of units free from lead-based paint hazards. Such training would improve the agencies' ability to achieve the delicate balance of setting rents for each unit as low as possible without reducing the program's ability to provide housing safe from lead-based paint hazards.

Recommendation 8-6:

Providing Streamlined Program Administration and Effective Training for Staff. The Task Force recommends that HUD and state and local housing agencies that administer tenant-based assistance programs streamline their operations and provide education and training in the areas of enforcing standards for physical condition, tenant-based assistance participant counseling, and rent reasonableness determinations.

Owner-Occupied Housing

Lead-based paint hazards represent a health threat to young children in households that own their homes, as well as families living in rental housing. Efforts to improve the lead-safety of the nation's housing stock need to include actions that effectively address lead-based paint hazards in the owner-occupied portion of the stock, particularly units occupied by young children.

Many of the strategies and recommendations presented in previous chapters address both types of housing—rental and owner-occupied. However, certain elements, such as the benchmark lead-based paint hazard control standards, are designed specifically for rental housing. The purpose of this chapter is to focus on owner-occupied units and to review the strategies and recommendations that pertain to these units.

Owner-occupied housing differs from rental housing in several important respects:

- Homeowners have substantial control over their living environment;
- Homeowners face little risk related to liability claims for EBL children; and
- Homeowners have strong motivations to protect their children from lead-based paint hazards.

The following sections discuss how the strategies and recommendations set forth elsewhere in the report apply to owner-occupied housing.

9.1 SAFELY ADDRESSING LEAD-BASED PAINT IN OWNER-OCCUPIED UNITS

Homeowners, just like rental property owners, need information about the proper steps to take to control lead-based paint hazards. Existing education efforts have increased homeowner awareness of lead-based

paint hazards and the potential danger they pose, but guidance about how to safely address lead-based paint and prevent the creation of hazards is often lacking. In fact, as discussed in Chapter 1, existing housing codes and lead-based paint requirements in some locations call for actions that are likely to produce new lead-based paint hazards.

The benchmark lead-based paint hazard control standards recommended in Chapter 3 are designed specifically for rental housing. For example, several elements of the standards call for action at the time of unit turnover—a mechanism that, while useful for rental housing, is much less relevant for owner-occupied units where turnover amounts to a change in ownership and occurs much less frequently. However, a number of protections called for in the benchmark standards have direct utility in owner-occupied units. These provisions, listed under Essential Maintenance Practices (see Exhibit 3-2), include:

- Avoiding the use of unsafe practices;
- Performing safe renovation, remodeling, and repairs;
- Conducting periodic visual checks for peeling paint; and
- Safely repairing deteriorating paint and its underlying causes.

As state and local governments modify their housing codes and regulations to establish lead-based paint requirements for rental housing based on the benchmark standards, they should consider including provisions for owner-occupied housing that address the elements listed above. Of course, to the extent the

benchmark standards are incorporated into local codes that apply universally, owner-occupied units would be covered automatically.

The Task Force emphasizes that the goal in applying the relevant elements of the benchmark standards to owner-occupied housing is to help homeowners avoid actions likely to create hazards and to urge them to watch for conditions that could pose hazards to their families. Because homeowners have an intrinsic motivation to protect the well-being of their children, the Task Force believes that pairing these requirements with educational initiatives (see Section 9.2 below), rather than enforcement, will foster greater action by homeowners to control lead-based paint hazards in their homes.

9.2 IMPORTANCE OF EDUCATIONAL INITIATIVES FOR HOMEOWNERS

Existing education efforts have helped to increase homeowner awareness of lead-based paint hazards, but more is needed. The real estate notification and disclosure requirements that are expected to take effect in 1996 will provide homebuyers with basic information about lead-based paint hazards and any known hazards in the property they are purchasing. However, if a unit has not been evaluated for lead-based paint hazards, the purchaser receives no property-specific information. As discussed in Chapter 10, educational initiatives should encourage families buying homes to take advantage of this important opportunity to get a risk assessment or paint inspection as part of the usual home inspection. Homeownership counseling agencies can also help to inform housing consumers and first-time homebuyers about lead-based paint issues.

Another important step is educating homeowners to avoid inadvertently creating lead-based paint hazards in their homes because of unsafe practices for removing paint (see Exhibit 3-2). Education initiatives to warn homeowners about unsafe maintenance and repair practices are a very cost-effective means of preventing childhood lead poisoning. Chapter 10 urges federal agencies and other key actors to develop an

aggressive strategy for educating owners on methods of preventing lead-based paint hazards during repainting, renovation, and rehabilitation activities.

9.3 FINANCING FOR LEAD-BASED PAINT HAZARD CONTROL IN OWNER-OCCUPIED UNITS

Many homeowners will be unable to pay for the work necessary to control lead-based paint hazards in their units unless they can finance the costs. Several recommendations in Chapter 5 are designed to expand the availability of private financing for lead-based paint hazard control. But homeowners may not be aware of existing loan products that can be used to finance lead-based paint hazard control. Efforts by lenders to increase public awareness of available loan products would help greatly. Chapter 10 identifies several approaches for increasing public awareness of available financing.

The Task Force, however, recognizes that many homeowners who require financing for lead-based paint hazard control work may not qualify for market-rate loans. Efforts to develop new public-private financing instruments for lead-based paint hazard control designed for borrowers who do not qualify for available private financing would further encourage homeowners to address lead-based paint hazards in their units. Recommendation 5-6 in Chapter 5 urges HUD, Fannie Mae, and Freddie Mac to support the formation of public-private lending partnerships to offer financing for lead-based paint hazard control.

9.4 TARGETED SUBSIDIES FOR ECONOMICALLY DISTRESSED OWNER-OCCUPIED UNITS

In many cases, the worst lead-based paint hazards are found in older, economically distressed homes. The families occupying these units do not earn sufficient income to pay for lead hazard controls. Without public subsidies, the hazards in these units will go untreated and children will remain at high risk of poisoning.

Recommendations 5-7 through 5-10 discuss several approaches for providing financial assistance to control hazards in economically distressed units.

9.5 INCREASED AVAILABILITY OF LEAD-BASED PAINT HAZARD CONTROL SERVICES

Families must be aware of contractors and consultants who are not properly trained and qualified. Homeowners hiring a risk assessor, lead-based paint inspector, or abatement contractor should only use individuals or firms certified by the state or EPA.

Liability insurers and bonding providers will help ensure the quality of work performed by contractors.

To obtain coverage, contractors will have to meet standards established by providers and designed to ensure that hazard evaluation and control work is performed properly. The standards for contractors performing hazard control activities are particularly important because contractors performing this type of work currently have no training or certification requirements.

Education Strategies

The lack of awareness about lead-based paint hazards and their control is a major contributor to childhood lead poisoning. Without appropriate knowledge, property owners may not take appropriate precautions, parents may not take simple protective measures, contractors may use unsafe remodeling practices, and doctors may misinform families about lead poisoning risks. Even where poisoned children are identified, misinformation may exacerbate the problem.

Thus, education is an essential and powerful tool for controlling lead hazards. By raising awareness of childhood lead poisoning problems and solutions, education creates the impetus to address lead-based paint hazards. Public education will also create demand for hazard-controlled housing and a competent workforce to perform lead hazard evaluation and control activities safely and reliably. While education is no substitute for benchmark lead-based paint maintenance and hazard control standards and other strategies discussed elsewhere in this report, it can be an important and cost-effective means of preventing childhood lead poisoning. The Task Force recognizes that virtually all types of persons and groups involved in preventing childhood lead poisoning need more accurate information about lead hazards and controls. The Task Force's mandate, however, is to address lead-based paint hazards in private housing. Thus, this chapter focuses on education for the following audiences, based on their roles regarding *private* housing:

- Parents and families
- Homeowners and homebuyers
- Rental property owners and managers
- Tenants
- Lead-based paint contractors and workers
- Home improvement industry
- Real estate industry

- Lenders
- Insurers
- Health care providers
- Community-based organizations
- Members of the legal community

Educational programs for these audiences must be integrated with activities recommended elsewhere in this report. Because of its focus on private housing, this chapter does not address educational issues for other important groups involved in solving the nation's lead poisoning problems, such as schools. Although the educational role of certain groups is beyond the scope of its mandate, the Task Force, nonetheless, supports the efforts of the Centers for Disease Control and Prevention (CDC), and other federal, state, and local agencies that are attempting to take a comprehensive approach to using education strategies to prevent childhood lead poisoning.

In view of the large number of overlapping audiences that need education on lead, interagency and public-private collaboration at all levels is essential. Information about lead hazards and controls can also be incorporated into existing programs on other environmental hazards to increase efficiency of efforts.

10.1 FRAMEWORK FOR DEFINING EDUCATIONAL GOALS

The process of developing an educational program is considerably more complex than writing and distributing pamphlets on childhood lead poisoning. Comprehensive models for developing effective educational programs have been described in detail elsewhere.¹ The basic steps include identification of:

- Key audiences
- Information needs
- Desired behavioral changes
- Potential barriers
- Communication channels
- Responsible parties
- Desired outcomes

This section briefly describes these steps in the context of the Task Force's recommendations.

As part of the process of developing an educational program, government agencies and other organizations need to identify the goals and program components most relevant to the communities they serve. Representatives of these communities should be involved throughout the program planning and implementation process.

The initial steps in developing program goals and components are identifying the *key audiences* to be educated and the *information needs* of each audience. Educational programs should be targeted toward specific audiences. Information needs will vary across audiences, but certain core messages need to be conveyed to all audiences. These *core messages* are described in the top right corner of this page.

In addition to the core messages, certain audiences need more specific information. For example, rental property owners need information about their legal responsibilities to meet established standards of maintenance and hazard control, as well as information on sources of financing for lead-based paint hazard control costs. Parents need information on common lead-based paint hazards in the home; sources of lead exposure; and the importance of good nutrition, hygiene, and screening.

The next steps are defining the *desired behavioral changes* by particular audiences and identifying *potential barriers* to achieving these changes and ways to overcome the barriers. Examples of desired behavioral changes include increasing the number of evaluations of homes for lead-based paint hazards, greater training of maintenance workers in safe practices, and the need for rental property owners to respond promptly to tenant complaints of deteriorating lead-

Core Messages for All Audiences

- Identification of hazards
- Causes of lead-based paint hazards
- How to prevent lead-based paint hazards
- Options for controlling and eliminating hazards, including cost and financing data
- Who can safely do the work
- How to make sure they've done it right
- How to respond to suspected poisoning
- Key laws and regulations (state, local, and federal)
- Where to get further information and help

based paint. Lack of funds for lead hazard control, lack of appropriate materials to reach diverse multicultural and multilingual audiences, and prevailing practices or attitudes are some of the barriers that need to be overcome.

Other steps include determining the most suitable *communication channels* for given audiences and messages and the corresponding *responsible parties* that need to convey the messages. For maximum cost-effectiveness, information should be provided primarily through existing communication channels. For example, homeowners, who may inadvertently create lead hazards by disturbing lead-based paint surfaces, can be reached through home improvement magazines and hardware stores. Property owners can receive pamphlets in their property tax bills or utility bills. Mailings by trade and professional associations and mailings to lead hazard evaluation and control workers regarding training and certification are another conduit for information. Information on lead-based paint concerns can also be included in outreach efforts addressing other housing, environmental, or health problems. Wherever possible, educational programs should use public resources in conjunction with community organizations and thereby build capacity within communities.

The final step is defining the *desired outcomes* of an educational program. These outcomes may constitute the ultimate goal of the program or serve as indicators of the program's success. Examples include fewer poisoned children, increased availability of affordable apartments that do not pose lead-based paint hazards, increased use of preventive practices, and increased numbers of trained and certified contractors and workers.

The steps discussed above are interrelated: Decisions made in any given step may require re-examination of decisions made in prior steps.

10.2 WHAT'S HAPPENING IN LEAD EDUCATION

Federal agencies are conducting a variety of educational activities, such as sponsoring grant programs for state and local governments and community-based organizations, funding the Regional Lead Training Centers, publishing lead hazard information pamphlets, operating an 800 number hotline and clearinghouse, and running public service announcements. Exhibit 10-1 highlights the key educational activities being conducted. Given the variety of programs and agencies involved, the Task Force encourages increased interagency collaboration to design strategies to communicate accurate information about lead-based paint to all key audiences while avoiding duplication of efforts by agencies acting independently.

Real Estate Disclosure. EPA and HUD are taking steps to increase the overall awareness of lead-based paint and its hazards. Forthcoming joint EPA and HUD regulations will establish real estate notification and disclosure requirements expected to take effect in 1996. Under these regulations, before the purchase or rental of pre-1978 housing, the seller or lessor must:

- Give the prospective buyer or renter EPA's lead hazard information pamphlet, "Protect Your Family from Lead in Your Home," (May 1995) which describes the general hazards of lead-based paint, provides tips on lead poisoning prevention, and discusses ways to eliminate lead-based paint hazards; and

- Disclose to the buyer or renter the presence of any known lead-based paint or any known lead-based paint hazards and provide any lead-based paint hazard evaluation report that they may have.

Prospective buyers must also be given a ten-day period in which to conduct a risk assessment or inspection if they elect to do so at their cost. These disclosure requirements will increase the information available to the public on lead-based paint hazards, both in general and in the specific housing units they may occupy.

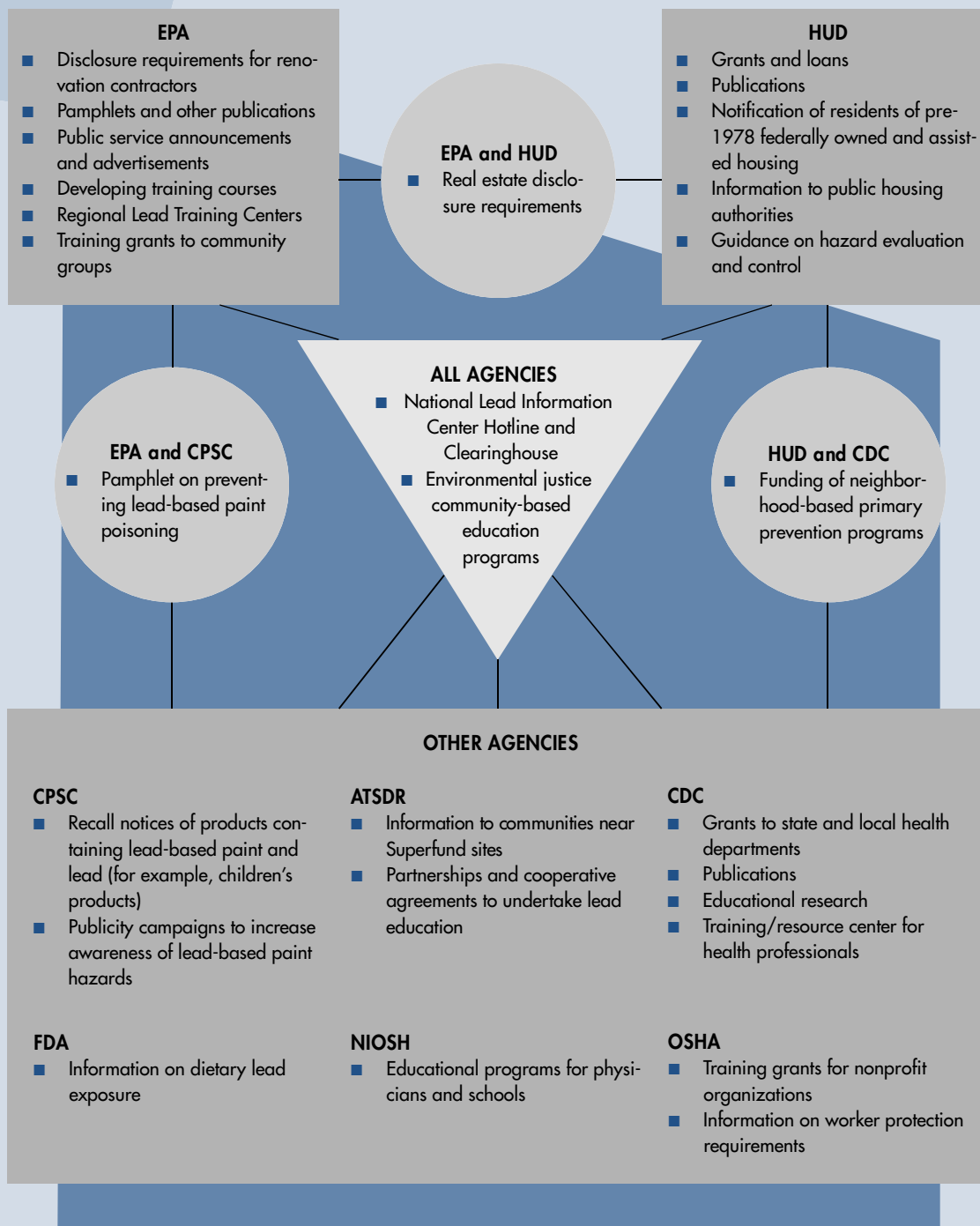
State and Local Governments. State and local governments also have a significant role in lead education. Being close to community housing and health concerns, state and local governments are well positioned to conduct educational activities. They can target important audiences and carefully address the specific educational needs of the communities they serve. Government agencies at each level should identify the types of activities they can conduct most effectively and should cooperate and coordinate among themselves and use jointly prepared materials wherever possible.

Nongovernmental Organizations. Finally, trade associations, churches, neighborhood organizations, ethnic associations, housing and community development groups, tenant organizations, environmental and health organizations, and other nongovernmental organizations are well positioned to participate in educational programs. These groups may be able to act more quickly than governmental agencies and have more direct and effective contact with affected communities than government agencies do.

10.3 CAPITALIZING ON THE REAL ESTATE NOTIFICATION AND DISCLOSURE PROCESS

The forthcoming real estate notification and disclosure regulations present a key opportunity for increasing the level of public awareness of lead-based paint hazards. The Federal Government should identify and use the most effective communication channels to alert the public to these regulations. One option is to fund a national public service announcement campaign,

Key Education Activities of Federal Agencies



ATSDR—Agency for Toxic Substances and Disease Registry
 CDC—Centers for Disease Control and Prevention
 CPSC—Consumer Product Safety Commission
 EPA—Environmental Protection Agency
 FDA—Food and Drug Administration

HHS—Department of Health and Human Services
 HUD—Department of Housing and Urban Development
 NIOSH—National Institute of Occupational Safety and Health
 OSHA—Occupational Safety and Health Administration

Key Opportunities for Lead Education

The following events present prime opportunities for education:

- Property transfers and financing
- Turnover of rental properties
- Renovation and remodeling activities that disturb lead-based paint
- Permitting and inspection
- Purchase of home repair equipment
- Pregnancy and childbirth
- Visits to the doctor
- Enrollment in day care, pre-school, or Head Start
- Distribution of public assistance and reimbursements for health care expenses

using electronic and print media. The campaign should raise public awareness and concern about childhood lead poisoning with appropriate (not alarmist) messages, fostering an environment in which the forthcoming disclosure rules are taken seriously.

In addition to a broad public campaign, information should be targeted specifically at homebuyers and property owners. EPA, HUD, and CDC, in collaboration with other agencies and private organizations, should use focus groups to identify the most effective ways to communicate with homebuyers and property owners in order to prompt voluntary lead-based paint hazard evaluation and control actions. HUD is presently conducting a survey to determine the extent of public awareness of lead-based paint problems and solutions and to identify the most effective means of reaching key audiences. The survey will be repeated after the disclosure requirements go into effect to determine their impact.

For successful implementation of the disclosure requirements, the cooperation of real estate agents is critical. Real estate agents need to be educated on disclosure and notification requirements and their importance, possibly through continuing education courses. Agents should inform parties involved in real estate

sales and rental agreements about the importance of their rights and responsibilities regarding lead-based paint. Buyer brokers and their agents should encourage prospective purchasers to get a hazard evaluation from a certified professional during the ten-day period, particularly for houses built before 1950. Federal agencies could work with local chapters of national real estate organizations to educate real estate agents.

In addition to real estate agents, home inspectors should be educated about lead-based paint hazards so that they can provide accurate maintenance tips to prospective homebuyers. They should further be encouraged to seek training and certification as lead-based paint risk assessors. Alternatively, they could refer homebuyers to certified lead-based paint inspectors or risk assessors.

To account for linguistic differences, all contracts, warnings, and other materials on lead hazards provided during a real estate transaction should be in languages understandable to prospective homebuyers and tenants. The forthcoming disclosure regulations propose that in cases where the sales contract is written in a language other than English, the lead warning statement must be included in the language of the contract as well.

Recommendation 10-1:

Capitalizing on the Real Estate Notification and Disclosure Process. The Task Force recommends that government agencies and private organizations develop and implement strategies to make optimal use of the educational opportunity presented by the real estate notification and disclosure process.

10.4 EDUCATING TO PREVENT HAZARDS FROM RENOVATION AND REMODELING

Renovation and remodeling activities can create considerable hazards by disturbing lead-based paint. Educational programs on safe remodeling practices can help prevent such hazards. An education strategy on renovation and remodeling should differentiate among remodeling contractors, do-it-yourself property owners and managers, owners and managers who hire contractors, and renters. The education for each of these

audiences should focus on activities such as repainting that may disturb lead-based paint in pre-1978 housing and thereby create lead-based paint hazards.

- Renovation and remodeling contractors and workers should be educated about lead-based paint hazards, safety measures to minimize such hazards, applicable Occupational Safety and Health Act requirements, unsafe practices, and the need to distribute information to property owners before renovation.
- Do-it-yourself homeowners and rental property owners and managers should be educated on lead-based paint hazards and how to remodel safely.
- Homeowners and rental property owners and managers who hire contractors for remodeling should insist on contractors who use appropriate renovation and remodeling techniques that do not disturb lead-based paint and thereby create hazards.
- Renters need information to help make sure that renovation and remodeling work is done safely and properly.

To publicize and prevent the potential dangers of renovation and remodeling activities, EPA has proposed that renovation contractors provide copies of “Protect Your Family from Lead in Your Home” to owners of pre-1978 housing prior to carrying out renovation and remodeling projects. EPA has also developed a public interest pamphlet entitled “Reducing Lead Hazards When Remodeling Your Home,” (April 1994). Both these pamphlets should be broadly distributed in a manner to ensure that property owners and tenants read and use them, as well as all other available information. In addition, as required by Title X, EPA, in consultation with the Consumer Product Safety Commission (CPSC), is developing information to be distributed by retailers of home improvement products to provide consumers with practical information related to the hazards of renovation and remodeling where lead-based paint may be present.

Several communication channels in addition to renovation contractors can be effectively used to convey information on lead hazards created during renovation and remodeling.

- Banks and other housing finance institutions should distribute the EPA pamphlets to homebuyers and property owners seeking loans for remodeling purposes.
- Manufacturers and retailers in the home improvement industry should help educate contractors, do-it-yourselfers, and other consumers by distributing EPA’s guidelines and pamphlets on home renovation and remodeling; distributing advisories on unsafe practices to purchasers of sandpaper, power sanding tools, heatguns, and related equipment and supplies; training salespersons; and providing fliers, tear sheets, and other materials for customers at hardware stores, in such places as the paint department. The industry’s participation is particularly critical for do-it-yourself homeowners and small contractors who may not be reached by any other source of information.
- Books, newspaper articles, other publications, and radio and television shows for homeowners and do-it-yourselfers should disseminate information on lead hazards and safe renovation methods.
- Finally, as part of the educational strategy, a prominent national spokesperson could inform the public about potential lead hazards from renovation and remodeling activities and necessary precautions.

Several federal agencies should help develop and implement this strategy, including EPA, HUD, CDC, CPSC, and Occupational Safety and Health Administration (OSHA). Public and private sector groups, including trade associations, labor unions, and state and local governments that will play a key role in implementation, should also participate. For example, EPA should open a dialogue with major home improvement retail chains to develop strategies for disseminating information to consumers.

Recommendation 10-2:

Educating to Prevent Hazards from Renovation and Remodeling. The Task Force recommends that government agencies and the home improvement indus-

try quickly develop an aggressive strategy to educate property owners and managers, contractors, workers, and renters about lead hazards that may be created during renovation and remodeling activities in pre-1978 housing.

Recommendation 10-3:

Educating Consumers through Retail Home Improvement Stores and Do-It-Yourself Magazines. The Task Force recommends that EPA, the Consumer Product Safety Commission, and other appropriate government agencies encourage the home improvement industry to inform consumers about the dangers of disturbing lead-based paint during home renovation and remodeling projects. Retail home improvement stores should be encouraged to distribute EPA's guidelines and pamphlets on home renovation and remodeling, advisories on prohibited practices, and other materials to purchasers of sandpaper, power sanding tools, heatguns, and related equipment and supplies. Publishers of do-it-yourself home repair magazines and books also should be encouraged to inform their readership about these dangers.

10.5 EDUCATING PARENTS, TENANTS, AND PROPERTY OWNERS

Parents are one of the most critical audiences in need of accurate information on lead-based paint hazards and poisoning prevention measures. Parents should be aware of the importance of minimizing lead exposure through regular housekeeping practices such as using wet methods of cleaning, where appropriate, to help reduce lead dust levels. Parents should also conduct visual checks for peeling paint and be aware of renovation projects that disturb old paint. Further, parents should understand the importance of testing their young children's blood lead levels and of following a good diet and proper hygiene (for example, washing hands before meals).

Parents who are tenants need education on their rights, roles, and responsibilities. They should be aware of the effects of lead poisoning, their rights under the

real estate notification and disclosure regulations, and the responsibilities of property owners under state and local laws and regulations. While property owners are responsible for maintaining units in good condition, parents who are tenants also have an important role to play in protecting their children, including:

- Communicating and cooperating with property owners by providing access to maintenance crews and contractors;
- Notifying property owners promptly of deteriorating paint or conditions that cause such deterioration;
- Performing routine or regular housekeeping to help reduce lead dust levels;
- Avoiding activities that disturb painted surfaces or generate dust;
- Ensuring good hygiene and nutrition; and
- Testing their children and reporting elevated blood levels to the property owner.

Educating parents in rental units on some basic steps that they can take to protect their families is particularly important for families residing in units where hazard control activities may not take place in the near future. The Task Force, however, does not suggest modifying existing laws concerning parents' duty of care for purposes of liability determinations.

Parents who own their homes need information on a variety of topics, including how to renovate safely, how to control lead hazards, performing housekeeping practices to reduce lead dust levels, testing their children, and the importance of good nutrition and proper hygiene.

Finally, rental property owners and managers should be provided guidance on applicable lead-based paint maintenance and hazard control standards, hiring certified contractors for hazard evaluation and abatement work, training maintenance crews, and sources of financing for hazard control work. Owners and managers also should be encouraged to incorporate lead hazard control measures into their general maintenance practices and to be responsive to tenant complaints about lead-based paint.

Recommendation 10-4:

Educating Parents and Rental Property Owners. The Task Force recommends that parents be educated about their rights, roles, and responsibilities to enable them to take all possible steps to protect their families' health and safety, and rental property owners and managers should be educated so that they take responsible steps to control lead hazards.

10.6 CREATING CULTURALLY APPROPRIATE MATERIALS

Childhood lead poisoning disproportionately affects low-income, inner-city neighborhoods and communities of color that are often culturally diverse. Therefore, educational materials should be culturally and linguistically tailored to reach non-English speakers and people at low literacy levels. These materials should include photo novellas with few words and public service announcements that are run on ethnic media. To effectively reach out to non-English speaking and low literacy audiences, the participation of community and ethnic-based organizations is essential, both in developing appropriate educational materials and implementing programs. Community-based organizations, such as churches, should also be involved in local educational programs because of their knowledge of the community's needs. Government agencies should award grants to such organizations to undertake lead-based paint education.

EPA, HUD, the Department of Health and Human Services, and other agencies should work with state and local organizations and private sector groups to develop "train the trainer" programs for public education related to lead-based paint hazards. Trained agency staff can, in turn, hire and train community residents and thereby build capacity within communities to undertake lead poisoning prevention work. Such programs have a particularly important role to play in educating high-priority neighborhoods where hazard control work may not take place promptly. Trained community residents can help educate the other members of the community, identify lead hazards, and ultimately perform lead hazard control work consistent

with state training and certification requirements.

Employing community workers will also create job opportunities in disadvantaged neighborhoods, where lead contamination is likely to be most severe. The importance of proper training and worker protection cannot be overemphasized. Programs involving community participation are already under way in some areas. Because community employment programs are relatively new, successful programs should be evaluated so that their success can be replicated elsewhere.

Recommendation 10-5:

Creating Culturally and Linguistically Appropriate Materials. The Task Force recommends that education providers work with minority, low-income, and non-English speaking people to develop and disseminate culturally and linguistically appropriate multimedia materials to educate families, communities, and workers at risk of being lead-poisoned about lead-based paint hazards and control methods.

10.7 PROMOTING INTERAGENCY AND PUBLIC-PRIVATE COLLABORATION

As noted earlier, interagency collaboration on public education is essential to avoid duplication of efforts. The Federal Interagency Lead-Based Paint Task Force, which consists of representatives from 20 federal agencies, is developing a strategy to increase such collaboration. The Task Force supports this effort and encourages additional collaboration and coordination. CDC, as the chair of the Federal Interagency Task Force's Education Subcommittee, has begun this process through its Childhood Lead Poisoning Prevention Education Conferences. The strategy should be designed to ensure that:

- Accurate information on health hazards and lead hazard control be developed and disseminated as soon as possible;
- Federal agencies send clear and consistent messages to avoid creating confusion for the public;

- The National Lead Information Center's Hotline and Clearinghouse be expanded to include more outreach activities targeted at audiences and neighborhoods at risk of lead poisoning and have more and multilingual staff available to respond to questions;
- Agencies participate in joint demonstration projects to promote collaboration and develop complementary strategies; and
- Agencies develop procedures to rapidly share important information.

A primary agency must be identified with overall responsibility to ensure that the strategy is implemented. In addition, EPA, HUD, and CDC should collaborate on developing and implementing an aggressive communications plan to disseminate this Task Force's recommendations.

When real estate notification and disclosure requirements take effect (expected in 1996), the demand for information and calls to the Hotline and Clearinghouse may increase. Therefore, the Federal Government should ensure that adequate resources are available to expand and strengthen the National Lead Information Center's Hotline and Clearinghouse. The Hotline and Clearinghouse, however, do not have the capacity to provide city- or county-specific information. Other groups should be responsible for disseminating such information (see Recommendation 10-7).

Finally, state and local capacity must be increased to provide accurate and specific information on issues such as local resources, regulations, and contractors. State and local housing, environmental, building, health, and social service departments should coordinate their efforts through interagency or joint committees or working groups. Private groups should also coordinate their activities among themselves and with government agencies to avoid duplication of efforts.

Recommendation 10-6:

Promoting Interagency and Public-Private Collaboration. Task Force recommends that federal, state, and local agencies, and private groups collaborate and coordinate their efforts to ensure that limited public resources effectively reach targeted audiences in a complementary manner.

10.8 OFFERING ACCESSIBLE, CENTRALIZED INFORMATION

Parents, tenants, property owners, doctors, day care providers, and other groups should be able to access complete and relevant information on all aspects of lead poisoning and prevention in one central place, instead of having to obtain it piecemeal from multiple sources. Local "one-stop shopping" sources for city- or county-specific information should be developed to:

- Answer questions from callers and visitors;
- Make EPA's and other pamphlets available to the public;
- Distribute information on issues such as tenant rights and the use and rental of special vacuums;
- Refer the public to appropriate local legal and medical services, training programs, trained and certified lead-based paint inspectors, risk assessors, and licensed contractors;
- Maintain a local registry of housing free from lead-based paint hazards, assist in locating such houses, and assist with temporary relocation during lead hazard control projects.

Such hotlines and repositories should coordinate their activities with the National Lead Information Center's Hotline and Clearinghouse.

Recommendation 10-7:

Making Comprehensive Information Easily Accessible in a Centralized Place. The Task Force recommends that state and local governments and nongovernmental groups continue and expand their efforts to make information on all aspects of lead poisoning, its prevention, and financing available in an accessible, centralized manner.

10.9 PROVIDING HOUSING COUNSELING AND INFORMATION ON FINANCING

Lenders can help increase homebuyers' awareness of potential lead-based paint hazards through their housing counseling and education programs. Such programs could include information on potential hazards of lead-based paint and appropriate methods to control

hazards. Fannie Mae and Freddie Mac, as well as primary lenders, should publicize their own loan products that can be used to finance home acquisition and rehabilitation, including lead-based paint hazard control. HUD should also develop a comprehensive document detailing the availability of HUD financing and insurance for home acquisition and rehabilitations that can be used to pay for lead-based paint hazard control.

Recommendation 10-8:

Providing Housing Counseling and Information on Financing Options. The Task Force recommends aggressive efforts by lenders to increase public awareness of both lead-based paint hazards and solutions and loan products that can be used to finance lead hazard control.

10.10 EDUCATING HEALTH CARE PROVIDERS TO EDUCATE PARENTS

Health care providers need education on lead-based paint hazards and solutions so that they are able to correctly identify and treat childhood lead poisoning. In addition, with proper education, the health care community can serve as an excellent conduit for educating parents and families on lead-based paint hazards and preventive measures. The health care community can be educated through public health departments, CDC grants, medical associations, medical journals, and medical schools. This education should cover a gamut of issues, such as:

- The causes of childhood lead poisoning;
- The importance of routinely screening young children's blood lead levels;
- How to accurately interpret laboratory results;
- Appropriate treatments for childhood lead poisoning;
- Preventive measures, such as proper housekeeping and dietary practices; and
- How to educate parents and families.

With better education, health care providers can help educate parents. Obstetricians, gynecologists, and pediatricians, who provide care to expecting mothers and young children, have a pivotal role to play in primary prevention as well as diagnosis and treatment. Doctors and nurses could discuss the hazards of lead-based paint with parents and families during routine examinations, advise parents to have their children screened, and place lead posters and pamphlets in their offices.

Recommendation 10-9:

Educating Health Care Providers. The Task Force recommends that health care providers be educated about childhood lead poisoning, its causes, methods of prevention and treatment, and the importance of routinely screening young children's blood lead levels. Health care providers also should be encouraged and trained to educate parents and families about childhood lead poisoning.

Research Needs

Lead has been investigated more than any other hazardous substance, which is appropriate given the widespread and serious effects of exposure to this heavy metal. Yet, our understanding of the harmful effects of lead greatly exceeds our understanding of how to control exposure to lead in the environment, especially lead in paint, dust, and soil. The Task Force recommends that research efforts be intensified to identify and validate the most cost-effective methods of evaluating and controlling lead-based paint hazards in housing.

Surprisingly few studies have examined alternative methods of hazard identification and control in housing and their feasibility, reliability, and cost-effectiveness in protecting the health of young children and workers. Completed studies demonstrate that a range of control measures appear to be effective in reducing blood lead levels for children with initially high blood lead levels and in preventing childhood lead poisoning due to lead-based paint hazards. The control methods studied range from education to dust removal to full abatement of all surfaces coated with lead-based paint. Because a wide range of controls can be effective, the need for additional research, as articulated in this chapter, should not be used to delay lead-based paint hazard control programs. The key question is not whether lead hazard control works. Rather, priority must be given to ensuring that controls are effective over time and to reducing their costs so that they can be carried out throughout the housing stock. Fortunately, ongoing programs can be used as field laboratories to address some of the research issues listed below.

11.1 RECOMMENDED RESEARCH TOPICS

While the Federal Government's research agenda is extensive, significant gaps in our knowledge about lead exposure and hazard control must be filled if the nation is to adopt a truly targeted and cost-effective approach to evaluating and controlling childhood lead poisoning. The Task Force recommends that the studies outlined below be funded by appropriate federal agencies. The Task Force believes that investments in these research projects will pay dividends many times over.

Evaluation of Cost-Effective Technologies for Testing Lead in Paint and Dust

Several new technologies show promise for rapid, inexpensive characterization of lead in dust and paint. They include ultrasonic extraction followed by anodic stripping voltammetry, lasers, and calorimetric systems. If successful, these systems could make lead-based paint and dust testing readily affordable to most property owners.

Research using new technologies also could advance our understanding of the distribution of lead-based paint and dust in housing. This knowledge could be used to modify evaluation protocols to reduce the number of samples per unit and the number of units sampled in a multifamily building. Knowledge about the variability of lead-based paint and dust within a unit and among units will permit better assumptions to guide statistical decision-making.

Previous EPA investigations demonstrated that many new technologies have a relatively high rate of error. Although various technologies are continuously being refined by the private sector in an effort to meet the demand for more reliable and less expensive testing methods, they are not being adequately evaluated.

The Task Force recommends that the Federal Government develop the capacity to expeditiously evaluate and approve new technologies.

Effectiveness of Specialized Cleaning Methods for Lead Dust

Specialized cleaning is a common lead hazard control activity. The need for special vacuuming in conjunction with specialized cleaning, however, is unclear. In addition, the effectiveness of alternative cleaning methods remains to be determined. Thus, the Task Force recommends that, as one of its top priorities, the Federal Government sponsor research to determine:

- The most effective types of detergents;
- Whether vacuums with special filters are needed for specialized cleaning;
- Cost-effective cleaning protocols appropriate for Essential Maintenance Practices and Standard Treatments; and
- Whether the traditional three-pass cleanup system following abatement (special vacuuming/wet wash/special vacuuming) can be shortened in favor of more inexpensive specialized dust removal methods.

If less extensive (and less expensive) cleaning protocols will suffice for Essential Maintenance Practices and Standard Treatments, the cost savings could be tremendous. A less expensive, but health-protective, cleaning protocol could make lead-based paint maintenance and control methods cost-effective in millions of units. Studies to evaluate and validate more cost-effective cleaning protocols are urgently needed so that the most appropriate techniques can be incorporated into Essential Maintenance Practices and Standard Treatments.

Long-Term Efficacy of Lead-Based Paint Hazard Control

Lead-based paint hazard control includes a wide spectrum of treatments aimed at addressing deteriorating paint and lead-contaminated dust and soil. A proper examination of any given treatment will measure both costs and effectiveness over an extended period of time

so that property owners and government agencies can make informed decisions about short-term and long-term investments. With careful specialized cleaning, most abatements, interim controls, or combinations of interim controls and abatement are likely to reduce household lead dust to acceptable levels. Nevertheless, several questions need to be answered: How quickly will lead dust reaccumulate after different treatment strategies? How frequently must lead dust levels be reevaluated and housing components re-cleaned or otherwise re-treated? How quickly does paint deteriorate to a hazardous state?

HUD is evaluating the effectiveness of the diverse lead-based paint hazard control strategies being implemented by 14 state and local governments that have received hazard control grants. These grantees are using a wide variety of treatments in about 5,000 dwellings and therefore offer an excellent real-world opportunity for comparative analysis. The HUD evaluation will gather data on the hazard controls undertaken, the change in lead-contaminated dust and children's blood lead levels, and the results of visual assessments of the control measures' integrity. The grantees are already collecting these data using a standard protocol, which will ensure scientifically sound and comparable data from across the country.

As presently designed and funded, however, the evaluation will measure lead dust reaccumulation and the impact on children's blood lead levels for only one year. The Task Force recommends that the evaluation be extended. The efficacy of these strategies and the lifecycle costs of interim controls would be better understood if the evaluations were extended to five years, the approximate lifespan of a typical repainting job. Such an extension would yield insight into the sources and rate of reaccumulation of lead dust and the impacts on children's blood lead levels beyond the first year. Long-term evaluation is particularly important since the likelihood that a control measure will fail increases over time (and few measures are likely to fail within one year). A multi-year study will help determine which methods of hazard control are ultimately the most cost-effective and to what extent long-term followup is needed.

Effectiveness of Encapsulation and Paint Film Stabilization

Relatively inexpensive methods of treating lead-based paint hazards include several newly developed encapsulants, as well as paint film stabilization. However, it is not known whether these treatments are effective in controlling childhood lead poisoning over time or, in the case of encapsulation, whether it is significantly more durable than ordinary paint. The Task Force recommends a study comparing the durability, effectiveness, and other performance characteristics of these coating systems with other abatement procedures under various conditions.

Utility of the Standard HUD/EPA Risk Assessment and Lead Hazard Screen Protocols

HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* (HUD Guidelines) and EPA's *Lead-Based Paint Risk Assessment Model Curriculum* contain detailed protocols for conducting full risk assessments and lead hazard screens as well as paint inspections and dust tests. The Task Force believes that the cost-effectiveness of the following aspects of the proposed protocols require further evaluation.

- **Risk assessments and lead hazard screens:** Lead hazard screens are a relatively inexpensive procedure used to determine whether a full risk assessment is needed. They could be widely implemented when a full risk assessment is unlikely to be warranted given the overall quality and condition of a property. The recommended research project would examine the utility and cost of the lead hazard screen in various projects. The study should also examine whether the error rates in the proposed sampling scheme for the lead hazard screen are acceptable.
- **Dust sampling:** Risk assessments and clearance testing rely largely on sampling of dust on floors, window sills, and window troughs. EPA regulations and the proposed HUD Guidelines describe

the number and locations of the samples to be collected. The Task Force recommends a study to confirm the appropriate number and type of environmental samples to be collected given both normal painting practices in multifamily units and the spatial variability involved in dust deposition. The study should also determine the most cost-effective sampling protocol consistent with protecting the health of occupants.

- **Composite testing:** The costs of dust testing can be substantially reduced if individual samples from floors, window wells, or window troughs are composited for laboratory testing. The protocol study should examine the feasibility, advantages, and disadvantages of composite dust wipe samples.
- **Paint Evaluation Protocols:** Deteriorating lead-based paint is a significant contributor to lead in household dust. Risk assessments typically examine paint condition and categorize it based on the size or percentage of the surface area of the component with deteriorating paint. Yet, little is known about how reliably the various categories used to describe paint condition correlate with lead dust. One part of the proposed study should examine this relationship.

Effective Control of Contaminated Soil

Bare soil with high concentrations of lead can cause elevated blood lead levels if children play in the soil or track it indoors. Removing or permanently covering contaminated soil is very expensive. This recommended project would evaluate the effectiveness of a variety of hazard control treatments, including covering bare soil with grass, mulch, or gravel and restricting access.

Review of Existing Data on the Relationship Between Lead Dust and Blood Lead Levels

Under Title X, EPA is required to establish the standards for hazardous levels of lead in dust. Given the prevalence of lead dust in U.S. housing, setting the standard too high would fail to adequately protect the nation's children. Setting the standards too low, however, would cause property owners to incur unnecessary expenses for specialized cleaning.

Several recently completed, but not yet reported, epidemiological studies seek to determine an allowable exposure limit for lead in household dust. Since these studies did not use consistent methodologies and protocols, a review of the studies could adjust for differences in sampling methods, demographics, geographic regions, and other factors to obtain the most precise estimates possible. With such adjustments, the studies should provide data upon which EPA could base standards for hazardous levels of lead in dust. Examining the existing epidemiological studies would also help to confirm the validity of a specific model of the relationship between lead dust and blood lead levels.

National Survey of the Prevalence of Lead-Contaminated Household Dust

The impact of standards for hazardous lead dust will be difficult to determine without better knowledge of how many houses will pass or fail any given proposed standard. In 1990, HUD completed a national survey of lead levels in dust, as well as other lead-based paint hazards. The survey, however, had several limitations:

- It used a vacuum sampling technique that underestimated lead dust levels compared to the more commonly used dust wipe sampling procedure.
- The extent to which the results of this vacuum sampling technique correlate with children's blood lead levels is not known.
- It is difficult to compare the survey results with existing lead dust standards, which were developed using wipe sampling.
- The sample was very small, consisting of approximately 330 housing units. Although these units were randomly selected, the confidence interval associated with such a small sample is quite large.

Another survey using wipe sampling (a technique that *has* been correlated with children's blood lead levels) and a larger, more representative sample of the U.S. housing stock is needed to define the possible financial impact, feasibility, and health protection offered by any proposed standard. Ideally, the proposed study could be expanded to determine the

prevalence of all lead-based paint hazards, as defined by Title X. By combining existing data with new information, the study costs could be minimized.

Rate of Dust Settling Following Abatement

Dust tests following lead hazard control work determine if lead dust levels meet clearance standards.

However, there are currently no consistent protocols for lead dust testing. The 1990 HUD guidelines for dust testing in public housing and the proposed EPA work practice regulations require a 24 hour wait after hazard control work, including cleaning, before conducting dust tests. The newly proposed HUD Guidelines suggest, based on theoretical calculations, that a one-hour interval is sufficient to allow airborne lead dust of the size generated during abatement projects to settle out of the air onto horizontal surfaces. If true, this shorter period would produce large savings by reducing the time, and thus the substantial expense, of relocating occupants during the abatement process. The Task Force recommends that a study be designed and completed to confirm or modify the appropriate length of the waiting period.

Contribution of Carpets and Upholstered Furniture to Childhood Lead Exposure

Carpets and upholstered furniture trap lead dust, but it is not known to what extent children ingest this dust through hand-to-mouth activities. Existing studies have demonstrated that removing lead dust from carpets and furniture is extraordinarily difficult. Existing practices vary from replacing carpets and upholstered furniture at considerable cost to ignoring the problem.

This recommended study would examine the relationship between carpet and upholstery dust and children's blood lead level. If carpets and upholstery are found to pose hazards, the study should gather the data necessary to develop standard methods of sampling carpets and upholstery to identify dust hazards. The study also should evaluate the effectiveness of alternative methods of cleaning carpets and upholstered furniture.

Contribution of Dust from Friction and Impact Surfaces to Childhood Lead Exposure

Friction and impact surfaces, particularly windows and doors, are included in Title X's definition of lead-based paint hazards. However, little is known about the amount of lead dust generated by such surfaces. This study would determine the extent to which friction and impact surfaces contribute to household dust. The study would also examine the benefits of window replacement and window treatment, which are often the largest expenses associated with lead-based paint hazard controls.

Occupational Exposures for Workers in Abatement and Interim Control

Few objective data exist on contaminated-dust generation and exposure from standard construction practices used by abatement and interim control contractors. This study would determine the degree to which these activities require controls, such as containment, respirators, protective clothing, and medical surveillance. Substantial savings could be achieved if less elaborate controls can adequately protect workers because their exposure to lead dust is found to be at lower levels than was previously believed.

A Positive Screen for High-Risk Units

A lead hazard screen, which can be performed as an alternative to a risk assessment, is a low-cost method of identifying units that do not have lead-based paint hazards; in other words, it is a negative screen. This method is advantageous for units that are unlikely to contain lead-based paint hazards because it minimizes the cost of determining that such hazards are not present.

There is no counterpart to the negative screen that would quickly and cost-effectively identify units with high probabilities of lead-based paint hazards. A positive screen would help state and local governments target their enforcement resources toward these high risk units. Research is needed to determine if it is feasible to develop a low-cost positive screen that could be implemented by individuals with limited training.

Use of this screen would reduce the cost of evaluation needed to identify units that are clearly hazardous and make it possible to focus more resources on controlling the hazards in these units.

The Task Force believes that the above list of suggested research activities should be strongly considered for accelerated funding as part of the national research agenda. Investment in research to validate more cost-effective hazard evaluation and control measures will save millions of dollars in the long run.

Recommendation 11-1:

Increasing Research Initiatives. The Task Force recommends that the Federal Government intensify efforts to validate more cost-effective methods to evaluate and control lead-based paint hazards in housing. Research efforts in the following areas should be initiated:

- Evaluation of inexpensive technologies for testing lead in paint and dust;
- Effectiveness of specialized cleaning methods for lead dust;
- The long-term efficacy of lead-based paint hazard control, including abatement, interim control, and Essential Maintenance Practices;
- Effectiveness of encapsulation and paint film stabilization;
- Utility of the standard HUD/EPA risk assessment and lead hazard screen protocols;
- Effective control of contaminated soil;
- Review of existing data on the relationship between lead dust and blood lead levels;
- National survey of the prevalence of lead-contaminated house dust;
- Rate of dust settling following abatement;
- Contribution of dust in carpets and upholstered furniture to childhood lead exposure;
- Contribution of dust from friction and impact surfaces to childhood lead exposure;
- Occupational exposures for workers in abatement and interim control; and
- A positive screen for high risk units.

CHAPTER 1

- 1 Pirkle, J.L., *et al.*, *The Decline in Blood Lead Levels in the United States*, Journal of the American Medical Association, July 27, 1994, pp. 284–291.
- 2 *Id.*, p. 284.
- 3 Brody, D.J., *et al.*, *Blood Lead Levels in the U.S. Population*, Journal of the American Medical Association, July 27, 1994, pp. 277–283.
- 4 Income level was defined by the poverty-income ratio (PIR): the total family income divided by a poverty threshold. Low income was defined as having a PIR greater than zero and less than 1.3, middle income was defined as having a PIR greater than or equal to 1.3 and less than 3.0, and high income was defined as having a PIR greater than or equal to 3.0.
- 5 U.S. Department of Housing and Urban Development, *Comprehensive and Workable Plan for the Abatement of Lead-Based Paint in Privately Owned Housing, Report to Congress*, Office of Policy Development and Research, Washington D.C., December 7, 1990.
- 6 The *Comprehensive and Workable Plan's* estimate of the number of units with lead dust hazards has weaknesses. The method used in the study to gather dust samples from units has since been determined to have lower capture rates than the currently accepted method of using dust wipes. Also, a significant number of units found to have unacceptable dust levels were included in this category due to the presence of leaded dust in window wells (as opposed to floors or interior window sills, which may be a greater exposure risk to children).
- 7 For detailed data on the characteristics of the housing stock that are important to lead-based paint policy, see Appendix A.
- 8 Due to aggregation in the AHS data set, a pre-1978 estimate was not available.
- 9 For purposes of this analysis, “economically distressed” has been defined as housing where an owner-occupant has insufficient income, savings, or equity to pay for lead-based paint hazard control (assumed at an annual income of less than \$20,000); or where a rental property owner’s cash flow cannot pay for a market-rate loan to finance hazard control (assumed where the renter’s monthly housing costs are less than \$500, the family income is less than \$20,000, and the renter is using more than 30 percent of this income to pay for housing).
- 10 A comparative analysis of American Housing Survey data from 1985, 1987, and 1989 for the same rental units indicates that well over one-third of the units were occupied by young children in at least one of the years surveyed, while only 7 percent of these units were occupied by households with young children in all three years. Analysis prepared by Cushing N. Dolbeare for the National Center for Lead-Safe Housing, 1993 (unpublished).
- 11 See U.S. Department of Health and Human Services, Centers for Disease Control, *Strategic Plan for the Elimination of Childhood Lead Poisoning*, February 1991, pp. 10–12 (hereafter referred to as *CDC Strategic Plan*); and Schwartz, J. in *Societal Benefits of Reducing Lead Exposure*, Environmental Research, vol. 66, 1994, pp. 105–124. The estimates of benefits provided below are taken from these studies. Monetary estimates have been converted into 1994 dollars using Consumer Price Index data. See also National Academy of Science, *Measuring Lead Exposure in Infants*, 1993.
- 12 U.S. Bureau of the Census, *1990 Census General Population Characteristics*, Table 13.
- 13 *CDC Strategic Plan*, pp. 11-12 and Appendix II, pp. 2-3; and Schwartz, p. 109. Dollar values have been converted into 1994 dollars.
- 14 Schwartz reports that “previous benefit analyses have estimated that 20 percent of lead-poisoned children (over 25 µg/dL) would require assistance from a reading teacher, school psychologist, or other specialist for an average of three years” (p. 109). For specific dollar estimates, see Schwartz, p. 109 and *CDC Strategic Plan*, pp. 11-12 and Appendix II, pp. 3-4. Dollar values have been converted into 1994 dollars.

- 15 *CDC Strategic Plan*, pp. 11-12 and Appendix II, pp. 4-9. Dollar values have been converted into 1994 dollars. See also Schwartz, pp. 109-114.
- 16 See sources cited in note 10.
- 17 *59 Federal Register* 45872, September 2, 1994 (notice of proposed rulemaking).
- 18 U.S. EPA, Office of Pollution Prevention and Toxics, EPA-747-R-94-002, April 28, 1994.
- 19 *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, prepared for U.S. Department of Housing and Urban Development by the National Center for Lead-Safe Housing, June 1995.
- 20 Memorandum from Lynn Goldman, Assistant Administrator, Office of Prevention, Pesticides and Toxic Substances, U.S. EPA to U.S. EPA Office Directors, *Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil*, July 14, 1994.
- 21 See Memorandum of Understanding between U.S. EPA and American Industrial Hygiene Association, December 10, 1993; and Memorandum of Understanding between U.S. EPA and the American Association for Laboratory Accreditation, December 1, 1993.
- 22 *58 Federal Register* 26590, May 4, 1993.
- 23 The National Lead Information Center provides information and advice about lead-based paint hazards. The Hotline-1-800-LEAD-FYI-accepts requests for a packet containing general information about lead. The Clearinghouse-1-800-424-LEAD-provides both general and technical assistance on topics such as lead poisoning and proper methods of abatement and construction.
- 24 *59 Federal Register* 54984, November 2, 1994 (notice of proposed rulemaking).
- 25 *59 Federal Register* 11108, March 9, 1994 (notice of proposed rulemaking).
- 26 *Lead-Based Paint Hazards and the Comprehensive Housing Affordability Strategy, How to Respond to Title X: Recommendations for Addressing Lead-Based Paint Hazards in Housing to Reduce Childhood Lead Poisoning*, The National Center for Lead-Safe Housing, 1993.
- 27 This estimate is based on the conservative assumption that rental units are distressed when total rent and utilities are less than \$500 monthly, occupant household income is less than \$20,000, and housing costs are above 30 percent of income, and owner-occupied units are distressed when household income is below \$20,000.
- 28 Because of the large number of elderly low-income owners, the proportion of owners with young children in distressed units was much lower, 10.2 percent (8.9 million).

CHAPTER 3

- 1 Refers to the vacuuming of a surface with a High-Efficiency Particulate Air (HEPA) filter vacuum, which uses a special filter capable of trapping dust particles as small as 0.3 microns.
- 2 See reference in note 19 of Chapter 1.
- 3 *"Evaluation of the Clean-Up of Lead Paint Dust in Houses."* Canada Mortgage and Housing Corporation, Research Division, Ontario, Canada, May 5, 1995.

CHAPTER 6

- 1 U.S. General Accounting Office, *Abatement Standards Are Needed to Ensure Availability of Insurance*, GAO/RCED-94-231, July 1994, p. 4.
- 2 U.S. General Accounting Office, p. 7.
- 3 In May 1994, the Legislature in the State of Maryland passed a new Lead Poisoning Prevention Program (Maryland House Bill 760) that includes an alternative compensation system based on a qualified offer by owners to provide injured tenants with very limited compensation. The Task Force recommendation for an offer of remedial compensation system does not constitute an endorsement of the Maryland legislation, which differs in substantial and important respects from the Task Force approach.

CHAPTER 8

- 1 Rent limitations for the two components of the Section 8 Existing Housing Program, Certificates and Vouchers, work differently. The Certificate program establishes a maximum tenant payment (generally 30 percent of monthly adjusted income) and limits the rent the owner may charge. The Voucher program does not establish a maximum rent the owner may charge, but does impose a maximum public subsidy. Current legislative and administrative proposals recommend combining the two programs.
- 2 See 24 CFR 882.109.
- 3 See definition of specialized cleaning in Chapter 1, Section 1.7.

CHAPTER 10

- 1 For example, Green, L.W., and M.W. Kreuter, *Health Promotion Planning: An Educational and Environmental Approach*, Mayfield Publishing, Mountain View, California, 1991.

Characteristics of the United States Housing Stock*

Economic and Physical Condition

	All Occupied Units					All Occupied Units: Children Under Six					Percent of All Occupied Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Rental Units															
Unknown	1,372	1,523	2,895	695	3,590	274	377	651	117	768	20.0%	24.8%	22.5%	16.8%	21.4%
Viable	7,308	10,127	17,435	5,988	23,422	1,557	2,181	3,738	1,082	4,820	21.3%	21.5%	21.4%	18.1%	20.6%
Economically Distressed**	2,850	2,805	5,655	1,164	6,819	658	591	1,248	268	1,517	23.1%	21.1%	22.1%	23.0%	22.2%
■ Economically and Physically Distressed	611	276	887	58	945	166	73	239	20	259	27.2%	26.4%	26.9%	34.1%	27.4%
■ Percent of Economically Distressed Units that Are Physically Distressed	21.5%	9.8%	15.7%	5.0%	13.9%	25.2%	12.3%	19.1%	7.4%	17.1%	NA	NA	NA	NA	NA
■ Economically Distressed and Physically Adequate	2,238	2,529	4,767	1,106	5,874	492	518	1,009	248	1,258	22.0%	20.5%	21.2%	22.5%	21.4%
Total	11,530	14,454	25,984	7,847	33,831	2,488	3,149	5,638	1,467	7,105	21.6%	21.8%	21.7%	18.7%	21.0%
Percent of All Rental Units that Are Economically Distressed	24.7%	19.4%	21.8%	14.8%	20.2%	26.4%	18.8%	22.1%	18.3%	21.3%	NA	NA	NA	NA	NA
Owner-Occupied Units															
Unknown	130	208	338	116	454	NA	NA	NA	NA	NA	0.0%	0.0%	NA	0.0%	0.0%
Viable	10,412	20,932	31,343	11,502	42,845	1,724	3,179	4,903	3,111	8,014	16.6%	15.2%	15.6%	27.1%	18.7%
Economically Distressed**	5,587	5,886	11,472	1,454	12,927	391	340	732	178	909	7.0%	5.8%	6.4%	12.2%	7.0%
■ Economically and Physically Distressed	709	549	1,258	88	1,346	87	51	138	34	171	12.2%	9.3%	10.9%	37.9%	12.7%
■ Percent of Economically Distressed Units that Are Physically Distressed	12.7%	9.3%	11.0%	6.1%	10.4%	22.2%	15.0%	18.8%	18.9%	18.8%	NA	NA	NA	NA	NA
■ Economically Distressed and Physically Adequate	4,878	5,337	10,215	1,366	11,581	305	289	594	144	738	6.2%	5.4%	5.8%	10.5%	6.4%
Total	16,128	27,026	43,154	13,072	56,226	2,115	3,519	5,634	3,289	8,923	13.1%	13.0%	13.1%	25.2%	15.9%
Percent of All Owner-Occupied Units that Are Economically Distressed	34.6%	21.8%	26.6%	11.1%	23.0%	18.5%	9.7%	13.0%	5.4%	10.2%	NA	NA	NA	NA	NA

*All numbers are presented in thousands.

Economic and Physical Condition continued

	All Occupied Units					All Occupied Units: Children Under Six					Percent of All Occupied Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
All Occupied Units															
Unknown	1,502	1,731	3,233	811	4,044	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Viable	17,720	31,059	48,778	17,490	66,267	3,280	5,360	8,641	4,193	12,834	18.5%	17.3%	17.7%	24.0%	19.4%
Economically Distressed**	8,437	8,691	17,127	2,618	19,746	1,049	931	1,980	446	2,426	12.4%	10.7%	11.6%	17.0%	12.3%
■ Economically and Physically Distressed	1,320	825	2,145	146	2,291	253	124	377	54	430	19.2%	15.0%	17.6%	36.4%	18.8%
■ Percent of Economically Distressed Units that Are Physically Distressed	15.6%	9.5%	12.5%	5.6%	11.6%	24.1%	13.3%	19.0%	12.1%	17.7%	NA	NA	NA	NA	NA
■ Economically Distressed and Physically Adequate	7,116	7,866	14,982	2,472	17,455	797	807	1,603	392	1,996	11.2%	10.3%	10.7%	15.9%	11.4%
Total	27,658	41,480	69,138	20,919	90,057	4,603	6,668	11,272	4,756	16,028	16.6%	16.1%	16.3%	22.7%	17.8%
Percent of All Units that Are Economically Distressed	30.5%	21.0%	24.8%	12.5%	21.9%	22.8%	14.0%	17.6%	9.4%	15.1%	NA	NA	NA	NA	NA

NOTE: Any differences in the total number of units across variables are due to rounding.

** Owner-occupied units in economic distress are defined as units where the homeowners' earnings are less than \$20,000 per year.

Rental units in economic distress are defined as units occupied by households that have yearly income less than \$20,000, housing costs that exceed \$500 per month, and pay more than 30 percent of their income for housing.

Rental Units

	All Rental Units					Rental Units: Children Under Six					Percent of Rental Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Age of Householder															
Under 25	1,294	1,784	3,078	1,100	4,178	498	632	1,130	305	1,435	1.5%	1.9%	3.3%	0.9%	4.2%
25 to 34 years	3,604	4,576	8,180	2,930	11,110	1,273	1,670	2,943	824	3,767	3.8%	4.9%	8.7%	2.4%	11.1%
35 to 44 years	2,632	3,073	5,705	1,493	7,198	503	599	1,102	271	1,373	1.5%	1.8%	3.3%	0.8%	4.1%
45 to 64 years	2,255	2,585	4,840	1,166	6,006	164	234	398	59	457	0.5%	0.7%	1.2%	0.2%	1.4%
Over 65	1,575	2,131	3,706	927	4,633	50	15	65	7	72	0.1%	0.0%	0.2%	0.0%	0.2%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	11,529	14,453	25,982	7,848	33,830	2,488	3,150	5,638	1,466	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Number of Bedrooms															
Zero	484	482	966	126	1,092	15	18	33	0	33	0.0%	0.1%	0.1%	0.0%	0.1%
One	3,573	4,168	7,741	2,539	10,280	422	372	794	152	946	1.2%	1.1%	2.3%	0.4%	2.8%
Two	4,369	6,151	10,520	3,806	14,326	1,095	1,529	2,624	879	3,503	3.2%	4.5%	7.8%	2.6%	10.4%
Three	2,459	3,023	5,482	1,139	6,621	755	1,036	1,791	378	2,169	2.2%	3.1%	5.3%	1.1%	6.4%
Four or more	645	630	1,275	238	1,513	201	194	395	58	453	0.6%	0.6%	1.2%	0.2%	1.3%
Total	11,530	14,454	25,984	7,848	33,832	2,488	3,149	5,637	1,467	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Peeling Paint															
No Peeling Paint	10,306	13,753	24,059	7,695	31,754	2,190	2,928	5,118	1,428	6,546	6.5%	8.7%	15.1%	4.2%	19.3%
Peeling Paint	1,224	701	1,925	153	2,078	298	222	520	39	559	0.9%	0.7%	1.5%	0.1%	1.7%
Total	11,530	14,454	25,984	7,848	33,832	2,488	3,150	5,638	1,467	7,105	7.4%	9.3%	16.7%	4.3%	21.0%

Rental Units continued

	All Rental Units					Rental Units: Children Under Six					Percent of Rental Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Age of Property															
Pre-1950	11,530	0	0	0	0	2,488	0	0	0	0	7.4%	0.0%	0.0%	0.0%	0.0%
1950-1978	0	14,454	0	0	0	0	3,149	0	0	0	0.0%	9.3%	0.0%	0.0%	0.0%
Pre-1978	0	0	25,984	0	25,984	0	0	5,637	0	5,637	0.0%	0.0%	16.7%	0.0%	16.7%
1979-1991	0	0	0	7,847	7,847	0	0	0	1,467	1,467	0.0%	0.0%	0.0%	4.3%	4.3%
Total	11,530	14,454	25,984	7,847	33,831	2,488	3,149	5,637	1,467	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Rent to Income Ratio															
Under 15	1,641	1,694	3,335	1,000	4,335	309	374	683	160	843	0.9%	1.1%	2.0%	0.5%	2.5%
15-30	3,916	5,741	9,657	3,266	12,923	814	1,145	1,959	628	2,587	2.4%	3.4%	5.8%	1.9%	7.6%
31-50	2,238	3,016	5,254	1,657	6,911	462	719	1,181	311	1,492	1.4%	2.1%	3.5%	0.9%	4.4%
Over 50	2,363	2,479	4,842	1,229	6,071	631	533	1,164	251	1,415	1.9%	1.6%	3.4%	0.7%	4.2%
Unknown	1,372	1,522	2,894	695	3,589	274	377	651	117	768	0.8%	1.1%	1.9%	0.3%	2.3%
Total	11,530	14,452	25,982	7,847	33,829	2,490	3,148	5,638	1,467	7,105	7.4%	9.3%	16.7%	4.3%	21.0%
Cracks															
No Cracks	10,104	13,463	23,567	7,595	31,162	2,094	2,816	4,910	1,380	6,290	6.2%	8.3%	14.5%	4.1%	18.6%
Cracks	1,426	990	2,416	252	2,668	394	334	728	87	815	1.2%	1.0%	2.2%	0.3%	2.4%
Total	11,530	14,453	25,983	7,847	33,830	2,488	3,150	5,638	1,467	7,105	7.4%	9.3%	16.7%	4.3%	21.0%
Holes															
No Holes	11,163	14,264	25,427	7,788	33,215	2,369	3,085	5,454	1,437	6,891	7.0%	9.1%	16.1%	4.2%	20.4%
Holes	367	190	557	59	616	119	64	183	30	213	0.4%	0.2%	0.5%	0.1%	0.6%
Total	11,530	14,454	25,984	7,847	33,831	2,488	3,149	5,637	1,467	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Children Under Six															
No Children Under Six	9,042	11,305	20,347	6,380	26,727	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
One Child	1,715	2,193	3,908	1,027	4,935	1,715	2,193	3,908	1,027	4,935	5.1%	6.5%	11.6%	3.0%	14.6%
Two Children	593	789	1,382	367	1,749	593	789	1,382	367	1,749	1.8%	2.3%	4.1%	1.1%	5.2%
Three Children	133	142	275	71	346	133	142	275	71	346	0.4%	0.4%	0.8%	0.2%	1.0%
Four or More Children	46	26	72	2	74	46	26	72	2	74	0.1%	0.1%	0.2%	0.0%	0.2%
Total	11,529	14,455	25,984	7,847	33,831	2,487	3,150	5,637	1,467	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Children 18 and Under															
No Children 18 and Under	6,946	8,777	15,723	5,154	20,877	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
One Child	1,845	2,435	4,280	1,310	5,590	852	1,177	2,029	591	2,620	2.5%	3.5%	6.0%	1.7%	7.7%
Two Children	1,541	1,917	3,458	865	4,323	814	1,073	1,887	516	2,403	2.4%	3.2%	5.6%	1.5%	7.1%
Three Children	746	867	1,613	353	1,966	478	559	1,037	225	1,262	1.4%	1.7%	3.1%	0.7%	3.7%
Four or More Children	451	457	908	166	1,074	345	341	686	135	821	1.0%	1.0%	2.0%	0.4%	2.4%
Total	11,529	14,453	25,982	7,848	33,830	2,489	3,150	5,639	1,467	7,106	7.4%	9.3%	16.7%	4.3%	21.0%
Leak															
No Leak	9,336	12,587	21,923	6,968	28,891	1,989	2,797	4,786	1,345	6,131	5.9%	8.3%	14.1%	4.0%	18.1%
Leak Present in Unit	1,956	1,522	3,478	626	4,104	485	353	838	119	957	1.4%	1.0%	2.5%	0.4%	2.8%
Unknown	238	345	583	253	836	14	0	14	3	17	0.0%	0.0%	0.0%	0.0%	0.1%
Total	11,530	14,454	25,984	7,847	33,831	2,488	3,150	5,638	1,467	7,105	7.4%	9.3%	16.7%	4.3%	21.0%

Rental Units continued

	All Rental Units					Rental Units: Children Under Six					Percent of Rental Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Metropolitan Area Description															
Central City of MSA	6,592	6,398	12,990	3,102	16,092	1,352	1,413	2,765	533	3,298	4.0%	4.2%	8.2%	1.6%	9.7%
Urbanized Suburb	1,970	4,997	6,967	2,630	9,597	429	1,061	1,490	442	1,932	1.3%	3.1%	4.4%	1.3%	5.7%
Other Urban Suburb	386	462	848	381	1,229	96	114	210	86	296	0.3%	0.3%	0.6%	0.3%	0.9%
Rural Suburb	577	620	1,197	715	1,912	122	149	271	153	424	0.4%	0.4%	0.8%	0.5%	1.3%
Urbanized Area Non-Metro	50	87	137	57	194	7	15	22	9	31	0.0%	0.0%	0.1%	0.0%	0.1%
Other Urban Non-Metro	937	1,154	2,091	553	2,644	211	232	443	124	567	0.6%	0.7%	1.3%	0.4%	1.7%
Rural Non-Metro	1,019	735	1,754	409	2,163	271	163	434	119	553	0.8%	0.5%	1.3%	0.4%	1.6%
Total	11,531	14,453	25,984	7,847	33,831	2,488	3,147	5,635	1,466	7,101	7.4%	9.3%	16.7%	4.3%	21.0%
Moved															
Pre 1975	1,090	731	1,821	0	1,821	45	20	65	0	65	0.1%	0.1%	0.2%	0.0%	0.2%
1975-1979	597	721	1,318	37	1,355	60	42	102	8	110	0.2%	0.1%	0.3%	0.0%	0.3%
1980-1984	1,266	1,154	2,420	377	2,797	190	120	310	26	336	0.6%	0.4%	0.9%	0.1%	1.0%
1985	370	517	887	125	1,012	61	93	154	11	165	0.2%	0.3%	0.5%	0.0%	0.5%
1986	434	526	960	206	1,166	88	101	189	28	217	0.3%	0.3%	0.6%	0.1%	0.6%
1987	623	689	1,312	401	1,713	154	144	298	70	368	0.5%	0.4%	0.9%	0.2%	1.1%
1988	673	964	1,637	612	2,249	180	234	414	117	531	0.5%	0.7%	1.2%	0.3%	1.6%
1989	1,326	1,868	3,194	1,020	4,214	365	530	895	232	1,127	1.1%	1.6%	2.6%	0.7%	3.3%
1990	2,010	2,889	4,899	1,686	6,585	520	733	1,253	341	1,594	1.5%	2.2%	3.7%	1.0%	4.7%
1991	2,953	4,085	7,038	3,151	10,189	822	1,131	1,953	634	2,587	2.4%	3.3%	5.8%	1.9%	7.6%
Born in Unit	18	4	22	0	22	3	0	3	0	3	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	11,529	14,452	25,981	7,847	33,828	2,488	3,148	5,636	1,467	7,103	7.4%	9.3%	16.7%	4.3%	21.0%
Units in Structure															
One Unit	4,554	4,900	9,454	1,949	11,403	1,193	1,417	2,610	509	3,119	3.5%	4.2%	7.7%	1.5%	9.2%
2-4 Units	4,045	2,627	6,672	1,278	7,950	854	548	1,402	309	1,711	2.5%	1.6%	4.1%	0.9%	5.1%
5-9 Units	1,116	1,972	3,088	1,456	4,544	199	410	609	277	886	0.6%	1.2%	1.8%	0.8%	2.6%
10-49 Units	1,292	3,288	4,580	2,430	7,010	186	581	767	320	1,087	0.5%	1.7%	2.3%	0.9%	3.2%
More than 50 Units	523	1,667	2,190	734	2,924	57	194	251	52	303	0.2%	0.6%	0.7%	0.2%	0.9%
Total	11,530	14,454	25,984	7,847	33,831	2,489	3,150	5,639	1,467	7,106	7.4%	9.3%	16.7%	4.3%	21.0%
Number of People in Unit															
One Person	3,928	4,858	8,786	2,718	11,504	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Two People	2,892	3,914	6,806	2,477	9,283	227	301	528	157	685	0.7%	0.9%	1.6%	0.5%	2.0%
Three People	1,974	2,390	4,364	1,231	5,595	848	1,078	1,926	578	2,504	2.5%	3.2%	5.7%	1.7%	7.4%
Four People	1,379	1,636	3,015	674	3,689	666	921	1,587	388	1,975	2.0%	2.7%	4.7%	1.1%	5.8%
Five or More People	1,187	1,349	2,536	516	3,052	746	849	1,595	344	1,939	2.2%	2.5%	4.7%	1.0%	5.7%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	11,529	14,451	25,980	7,848	33,828	2,487	3,149	5,636	1,467	7,103	7.4%	9.3%	16.7%	4.3%	21.0%
Poverty															
Under the Poverty Level	3,202	3,063	6,265	1,334	7,599	1,095	935	2,030	452	2,482	3.2%	2.8%	6.0%	1.3%	7.3%
100-199 of Poverty	2,930	3,745	6,675	1,623	8,298	685	1,121	1,806	388	2,194	2.0%	3.3%	5.3%	1.1%	6.5%
More than 200 of Poverty	5,398	7,646	13,044	4,891	17,935	707	1,095	1,802	626	2,428	2.1%	3.2%	5.3%	1.9%	7.2%
Total	11,530	14,454	25,984	7,848	33,832	2,487	3,151	5,638	1,466	7,104	7.4%	9.3%	16.7%	4.3%	21.0%

Rental Units continued

	All Rental Units					Rental Units: Children Under Six					Percent of Rental Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Food Stamps Received															
No Food Stamps Received	5,394	6,734	12,128	3,288	15,416	704	1,078	1,782	425	2,207	2.1%	3.2%	5.3%	1.3%	6.5%
Food Stamps Received	2,243	1,965	4,208	788	4,996	1,045	862	1,907	417	2,324	3.1%	2.5%	5.6%	1.2%	6.9%
Unknown	3,893	5,756	9,649	3,771	13,420	738	1,210	1,948	625	25,73	2.2%	3.6%	5.8%	1.8%	7.6%
Total	11,530	14,455	25,985	7,847	33,832	24,87	3,150	5,637	1,467	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Welfare															
No Welfare or SSI	9,412	12,411	21,823	6,933	28,756	1,669	2,423	4,092	1,138	5,230	4.9%	7.2%	12.1%	3.4%	15.5%
Welfare or SSI Received	1,948	1,739	3,687	682	4,369	819	728	1,547	329	1,876	2.4%	2.2%	4.6%	1.0%	5.5%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	11,529	14,454	25,983	7,847	33,830	2,488	3,151	5,639	1,467	7,106	7.4%	9.3%	16.7%	4.3%	21.0%
Race of Head of Household															
White	7,070	9,099	16,169	5,432	21,601	1,282	1,600	2,882	808	3,690	3.8%	4.7%	8.5%	2.4%	10.9%
Black	2,434	2,813	5,247	1,009	6,256	664	797	1,461	280	1,741	2.0%	2.4%	4.3%	0.8%	5.1%
Hispanic	1,488	1,592	3,080	773	3,853	463	592	1,055	249	1,304	1.4%	1.7%	3.1%	0.7%	3.9%
Native American	45	100	145	88	233	13	36	49	51	100	0.0%	0.1%	0.1%	0.2%	0.3%
Asian	265	510	775	284	1,059	58	114	172	75	247	0.2%	0.3%	0.5%	0.2%	0.7%
Other	59	35	94	29	123	9	9	18	4	22	0.0%	0.0%	0.1%	0.0%	0.1%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	11,530	14,453	25,983	7,847	33,830	2,489	3,148	5,637	1,467	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Public/Private Owner															
Private Housing	10,860	12,776	23,636	7,021	30,657	2,326	2,853	5,179	1,303	6,482	6.9%	8.4%	15.3%	3.9%	19.2%
Public Housing	399	1,252	1,651	549	2,200	151	281	432	152	584	0.4%	0.8%	1.3%	0.4%	1.7%
Unknown	271	426	697	277	974	11	16	27	11	38	0.0%	0.0%	0.1%	0.0%	0.1%
Total	11,530	14,454	25,984	7,847	33,831	2,488	3,150	5,638	1,466	7,104	7.4%	9.3%	16.7%	4.3%	21.0%
Quality of Unit															
Adequate	9,613	13,263	22,876	7,538	30,414	1,969	2,826	4,795	1,384	6,179	5.8%	8.4%	14.2%	4.1%	18.3%
Moderately Inadequate	1,328	768	2,096	147	2,243	374	216	590	49	639	1.1%	0.6%	1.7%	0.1%	1.9%
Severely Inadequate	589	423	1012	162	1,174	145	107	252	33	285	0.4%	0.3%	0.7%	0.1%	0.8%
Total	11,530	14,454	25,984	7,847	33,831	2,488	3,149	5,637	1,466	7,103	7.4%	9.3%	16.7%	4.3%	21.0%
Household Income Including Non-Relatives															
Zero or negative	160	236	396	132	528	34	51	85	14	99	0.1%	0.2%	0.3%	0.0%	0.3%
\$1-9999	3,189	3,179	6,368	1,435	7,803	805	629	1,434	341	1,775	2.4%	1.9%	4.2%	1.0%	5.2%
\$10000-19999	2,758	3,324	6,082	1,493	7,575	616	818	1,434	311	1,745	1.8%	2.4%	4.2%	0.9%	5.2%
\$20000-29999	2,211	3,121	5,332	1,622	6,954	405	756	1,161	321	1,482	1.2%	2.2%	3.4%	0.9%	4.4%
\$30000-39999	1,323	1,746	3,069	1,110	4,179	303	392	695	196	891	0.9%	1.2%	2.1%	0.6%	2.6%
\$40000-49999	698	1,244	1,942	710	2,652	148	254	402	125	527	0.4%	0.8%	1.2%	0.4%	1.6%
\$50000-59999	419	548	967	414	1,381	76	104	180	60	240	0.2%	0.3%	0.5%	0.2%	0.7%
\$60000 or more	603	752	1,355	700	2,055	100	146	246	100	346	0.3%	0.4%	0.7%	0.3%	1.0%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	11,530	14,454	25,984	7,848	33,832	2,487	3,150	5,637	1,468	7,105	7.4%	9.3%	16.7%	4.3%	21.0%

Rental Units continued

	All Rental Units					Rental Units: Children Under Six					Percent of Rental Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Family Income: Householder and relatives															
Zero or negative	208	291	499	141	640	39	62	101	14	115	0.1%	0.2%	0.3%	0.0%	0.3%
\$1-9999	3,432	3,449	6,881	1,572	8,453	853	689	1,542	366	1,908	2.5%	2.0%	4.6%	1.1%	5.6%
\$10000-19999	2,951	3,511	6,462	1,676	8,138	624	828	1,452	333	1,785	1.8%	2.4%	4.3%	1.0%	5.3%
\$20000-29999	2,162	3,169	5,331	1,681	7,012	395	731	1,126	316	1,442	1.2%	2.2%	3.3%	0.9%	4.3%
\$30000-39999	1,169	1,590	2,759	1,026	3,785	260	364	624	178	802	0.8%	1.1%	1.8%	0.5%	2.4%
\$40000-49999	605	1,084	1,689	581	2,270	148	249	397	114	511	0.4%	0.7%	1.2%	0.3%	1.5%
\$50000-59999	345	442	787	347	1,134	74	87	161	55	216	0.2%	0.3%	0.5%	0.2%	0.6%
\$60000 or more	488	615	1,103	592	1,695	94	139	233	91	324	0.3%	0.4%	0.7%	0.3%	1.0%
Unknown	169	304	473	232	705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	1,1529	14,455	25,984	7,848	33,832	2,487	3,149	5,636	1,467	7,103	7.4%	9.3%	16.7%	4.3%	21.0%
Monthly Housing Costs															
\$1-249	1,668	1,706	3,374	744	4,118	316	350	666	165	831	0.9%	1.0%	2.0%	0.5%	2.5%
\$250-499	5,136	5,513	10,649	2,421	13,070	1,141	1,106	2,247	451	2,698	3.4%	3.3%	6.6%	1.3%	8.0%
\$500-749	2,525	4,240	6,765	2,632	9,397	572	942	1,514	439	1,953	1.7%	2.8%	4.5%	1.3%	5.8%
More than \$750	1,013	1,745	2,758	1,474	4,232	221	431	652	301	953	0.7%	1.3%	1.9%	0.9%	2.8%
Unknown	1,187	1,250	2,437	576	3,013	238	321	559	111	670	0.7%	0.9%	1.7%	0.3%	2.0%
Total	11,529	14,454	25,983	7,847	33,830	2,488	3,150	5,638	1,467	7,105	7.4%	9.3%	16.7%	4.3%	21.0%
Rent															
\$1-249	2,697	2,086	4,783	780	5563	8	8	16	16	32	0.0%	0.0%	0.0%	0.0%	0.1%
\$250-499	5,244	6,776	12,020	3,352	15,372	27	38	65	47	112	0.1%	0.1%	0.2%	0.1%	0.3%
\$500-749	1,954	3,438	5,392	2,399	7,791	20	34	54	0	54	0.1%	0.1%	0.2%	0.0%	0.2%
More than \$750	763	1,333	2,096	1,065	3,161	2,282	2,823	5,105	1,351	6,456	6.7%	8.3%	15.1%	4.0%	19.1%
Unknown	872	820	1,692	251	1,943	151	247	398	53	451	0.4%	0.7%	1.2%	0.2%	1.3%
Total	11,530	14,453	25,983	7,847	33,830	2,488	3,150	5,638	1,467	7,105	7.4%	9.3%	16.7%	4.3%	21.0%

NOTE: Any differences in the total number of units across variables are due to rounding.

Owner-Occupied Units

	All Owner-Occupied Units					Owner-Occupied Units: Children Under Six					Percent of Owner-Occupied Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Age of Householder															
Under 25	123	170	293	145	438	43	51	94	57	151	0.1%	0.1%	0.2%	0.1%	0.3%
25 to 34	1,948	2,929	4,877	3,166	8,043	925	1,488	2,413	1,669	4,082	1.6%	2.6%	4.3%	3.0%	7.3%
35 to 44	3,152	5,619	8,771	4,462	13,233	783	1,363	2,146	1,291	3,437	1.4%	2.4%	3.8%	2.3%	6.1%
45 to 64	5,030	10,909	15,939	3,760	19,699	276	525	801	259	1,060	0.5%	0.9%	1.4%	0.5%	1.9%
Over 65	5,747	7,190	12,937	1,422	14,359	89	92	181	12	193	0.2%	0.2%	0.3%	0.0%	0.3%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,130	27,026	43,156	13,071	56,227	2,116	3,519	5,635	3,288	8,923	3.8%	6.3%	10.0%	5.8%	15.9%
Number of Bedrooms															
Zero	18	52	70	6	76	2	5	7	0	7	0.0%	0.0%	0.0%	0.0%	0.0%
One	682	593	1,275	257	1,532	22	7	29	29	58	0.0%	0.0%	0.1%	0.1%	0.1%
Two	5,136	5,090	10,226	2,404	12,630	538	462	1,000	274	1,274	1.0%	0.8%	1.8%	0.5%	2.3%
Three	6,911	15,466	22,377	7,075	29,452	999	2,101	3,100	1,883	4,983	1.8%	3.7%	5.5%	3.3%	8.9%
Four or more	3,381	5,825	9,206	3,331	12,537	554	943	1,497	1,103	2,600	1.0%	1.7%	2.7%	2.0%	4.6%
Total	16,128	27,026	43,154	13,073	56,227	2,115	3,518	5,633	3,289	8,922	3.8%	6.3%	10.0%	5.8%	15.9%
Peeling Paint															
No Peeling Paint	15,101	26,428	41,529	12,951	54,480	1,936	3,390	5,326	3,248	8,574	3.4%	6.0%	9.5%	5.8%	15.2%
Peeling Paint	1,027	598	1,625	122	1,747	179	128	307	41	348	0.3%	0.2%	0.5%	0.1%	0.6%
Total	16,128	27,026	43,154	13,073	56,227	2,115	3,518	5,633	3,289	8,922	3.8%	6.3%	10.0%	5.8%	15.9%
Age of Property															
Pre-1950	16,128	0	0	0	0	2,115	0	0	0	0	3.8%	0.0%	0.0%	0.0%	0.0%
1950-1978	0	27,026	0	0	0	0	3,519	0	0	0	0.0%	6.3%	0.0%	0.0%	0.0%
Pre-1978	0	0	43,154	0	43,154	0	0	5,634	0	5,634	0.0%	0.0%	10.0%	0.0%	10.0%
1979-1991	0	0	0	13,072	13,072	0	0	0	3,289	3,289	0.0%	0.0%	0.0%	5.8%	5.8%
Total	16,128	27,026	43,154	13,072	56,226	2,115	3,519	5,634	3,289	8,923	3.8%	6.3%	10.0%	5.8%	15.9%
Rent to Income Ratio															
Under 15	6,197	10,897	17,094	3,269	20,363	566	899	1,465	554	2,019	1.0%	1.6%	2.6%	1.0%	3.6%
15-30	5,382	9,278	14,660	5,765	20,425	835	1,551	2,386	1,650	4,036	1.5%	2.8%	4.2%	2.9%	7.2%
31-50	1,860	2,722	4,582	1,758	6,340	308	552	860	611	1,471	0.5%	1.0%	1.5%	1.1%	2.6%
Over 50	1,114	1,370	2,484	666	3,150	160	158	318	107	425	0.3%	0.3%	0.6%	0.2%	0.8%
Unknown	1,576	2,760	4,336	1,614	5,950	246	360	606	368	974	0.4%	0.6%	1.1%	0.7%	1.7%
Total	16,129	27,027	43,156	13,072	56,228	2,115	3,520	5,635	3,290	8,925	3.8%	6.3%	10.0%	5.9%	15.9%
Cracks															
No Cracks	15,260	26,279	41,539	12,869	54,408	1,956	3,370	5,326	3,229	8,555	3.5%	6.0%	9.5%	5.7%	15.2%
Cracks	868	747	1,615	203	1,818	159	149	308	60	368	0.3%	0.3%	0.5%	0.1%	0.7%
Total	16,128	27,026	43,154	13,072	56,226	2,115	3,519	5,634	3,289	8,923	3.8%	6.3%	10.0%	5.8%	15.9%
Holes															
No Holes	15,948	26,869	42,817	13,040	55,857	2,080	3,500	5,580	3,281	8,861	3.7%	6.2%	9.9%	5.8%	15.8%
Holes	180	157	337	33	370	35	19	54	7	61	0.1%	0.0%	0.1%	0.0%	0.1%
Total	16,128	27,026	43,154	13,073	56,227	2,115	3,519	5,634	3,288	8,922	3.8%	6.3%	10.0%	5.8%	15.9%

Owner-Occupied Units continued

	All Owner-Occupied Units					Owner-Occupied Units: Children Under Six					Percent of Owner-Occupied Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Children Under Six															
No Children Under Six	14,013	23,506	37,519	9,784	47,303	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
One Child	1,426	2,535	3,961	2,317	6,278	1,426	2,535	3,961	2,317	6,278	2.5%	4.5%	7.0%	4.1%	11.2%
Two Children	576	857	1,433	853	2,286	576	857	1,433	853	2,286	1.0%	1.5%	2.5%	1.5%	4.1%
Three Children	101	121	222	114	336	101	121	222	114	336	0.2%	0.2%	0.4%	0.2%	0.6%
Four or More Children	12	6	18	5	23	12	6	18	5	23	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,128	27,025	43,153	13,073	56,226	2,115	3,519	5,634	3,289	8,923	3.8%	6.3%	10.0%	5.8%	15.9%
Children 18 and Under															
No Children 18 and Under	10,808	17,419	28,227	6,387	34,614	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
One Child	2,184	3,936	6,120	2,428	8,548	674	1,050	1,724	1,048	2,772	1.2%	1.9%	3.1%	1.9%	4.9%
Two Children	1,913	3,740	5,653	2,880	8,533	737	1,454	2,191	1,400	3,591	1.3%	2.6%	3.9%	2.5%	6.4%
Three Children	822	1,388	2,210	1,090	3,300	453	691	1,144	631	1,775	0.8%	1.2%	2.0%	1.1%	3.2%
Four or More Children	401	544	945	287	1,232	251	324	575	209	784	0.4%	0.6%	1.0%	0.4%	1.4%
Total	16,128	27,027	43,155	13,072	56,227	2,115	3,519	5,634	3,288	8,922	3.8%	6.3%	10.0%	5.8%	15.9%
Leak															
No Leak	12,004	22,689	34,693	11,226	45,919	1,417	2,780	4,197	2,789	6,986	2.5%	4.9%	7.5%	5.0%	12.4%
Leak Present in Unit	3,961	4,068	8,029	1,689	9,718	691	724	1,415	485	1,900	1.2%	1.3%	2.5%	0.9%	3.4%
Unknow	163	269	432	157	589	6	15	21	15	36	0.0%	0.0%	0.0%	0.0%	0.1%
Total	16,128	27,026	43,154	13,072	56,226	2,114	3,519	5,633	3,289	8,922	3.8%	6.3%	10.0%	5.8%	15.9%
Metropolitan Area Description															
Central City of MSA	5,929	6,743	12,672	2,224	14,896	787	982	1,769	609	2,378	1.4%	1.7%	3.1%	1.1%	4.2%
Urbanized Suburb	3,554	10,403	13,957	4,377	18,334	486	1,481	1,967	1,102	3,069	0.9%	2.6%	3.5%	2.0%	5.5%
Other Urban Suburb	633	947	1,580	666	2,246	102	124	226	171	397	0.2%	0.2%	0.4%	0.3%	0.7%
Rural Suburb	1,679	3,504	5,183	3,294	8,477	226	359	585	893	1,478	0.4%	0.6%	1.0%	1.6%	2.6%
Urbanized Area Non-Metro	38	134	172	52	224	7	18	25	15	40	0.0%	0.0%	0.0%	0.0%	0.1%
Other Urban Non-Metro	1,658	1,912	3,570	599	4,169	227	225	452	130	582	0.4%	0.4%	0.8%	0.2%	1.0%
Rural Non-Metro	2,637	3,383	6,020	1,860	7,880	278	330	608	369	977	0.5%	0.6%	1.1%	0.7%	1.7%
Total	16,128	27,026	43,154	13,072	56,226	2,113	3,519	5,632	3,289	8,921	3.8%	6.3%	10.0%	5.8%	15.9%
Moved															
Pre 1975	7,704	10,710	18,414	0	18,414	196	313	509	0	509	0.3%	0.6%	0.9%	0.0%	0.9%
1975-1979	1,912	4,992	6,904	490	7,394	158	395	553	44	597	0.3%	0.7%	1.0%	0.1%	1.1%
1980-1984	1,755	2,852	4,607	2,576	7,183	387	514	901	466	1,367	0.7%	0.9%	1.6%	0.8%	2.4%
1985	512	956	1,468	961	2,429	158	240	398	199	597	0.3%	0.4%	0.7%	0.4%	1.1%
1986	595	1,242	1,837	1,087	2,924	186	354	540	295	835	0.3%	0.6%	1.0%	0.5%	1.5%
1987	662	1,211	1,873	1,353	3,226	231	353	584	389	973	0.4%	0.6%	1.0%	0.7%	1.7%
1988	705	1,181	1,886	1,358	3,244	243	354	597	398	995	0.4%	0.6%	1.1%	0.7%	1.8%
1989	686	1,292	1,978	1,843	3,821	217	386	603	531	1,134	0.4%	0.7%	1.1%	0.9%	2.0%
1990	812	1,369	2,181	1,861	4,042	187	365	552	526	1,078	0.3%	0.6%	1.0%	0.9%	1.9%
1991	515	988	1,503	1,427	2,930	132	238	370	441	811	0.2%	0.4%	0.7%	0.8%	1.4%
Born in Unit	141	26	167	0	167	19	5	24	0	24	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,129	27,028	43,157	13,072	56,229	2,114	3,517	5,631	3,289	8,920	3.8%	6.3%	10.0%	5.8%	15.9%

Owner-Occupied Units continued

	All Owner-Occupied Units					Owner-Occupied Units: Children Under Six					Percent of Owner-Occupied Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Units in Structure															
One Unit	14,664	25,654	40,318	12,150	52,468	1,973	3,426	5,399	3,207	8,606	3.5%	6.1%	9.6%	5.7%	15.3%
2-4 Units	1,221	548	1,769	312	2,081	135	58	193	34	227	0.2%	0.1%	0.3%	0.1%	0.4%
5-9 Units	88	180	268	174	442	1	18	19	21	40	0.0%	0.0%	0.0%	0.0%	0.1%
10-49 Units	66	321	387	300	687	2	5	7	12	19	0.0%	0.0%	0.0%	0.0%	0.0%
Over 50 Units	88	323	411	137	548	4	15	19	15	34	0.0%	0.0%	0.0%	0.0%	0.1%
Total	16,127	27,026	43,153	13,073	56,226	2,115	3,522	5,637	3,289	8,926	3.8%	6.3%	10.0%	5.8%	15.9%
Number of People in Unit															
One Person	3,815	4,446	8,261	1,444	9,705	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Two People	5,561	9,967	15,528	4,206	19,734	42	66	108	49	157	0.1%	0.1%	0.2%	0.1%	0.3%
Three People	2,639	4,832	7,471	2,584	10,055	572	832	1,404	970	2,374	1.0%	1.5%	2.5%	1.7%	4.2%
Four People	2,224	4,646	6,870	3,050	9,920	703	1,342	2,045	1,332	3,377	1.3%	2.4%	3.6%	2.4%	6.0%
Five or More People	1,760	2,925	4,685	1,672	6,357	797	1,279	2,076	938	3,014	1.4%	2.3%	3.7%	1.7%	5.4%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,129	27,025	43,154	13,072	56,226	2,114	3,519	5,633	3,289	8,922	3.8%	6.3%	10.0%	5.8%	15.9%
Poverty															
Under the Poverty Level	1,781	1,823	3,604	566	4,170	244	219	463	119	582	0.4%	0.4%	0.8%	0.2%	1.0%
100-199 of Poverty	3,703	3,988	7,691	1,193	8,884	476	601	1,077	342	1,419	0.8%	1.1%	1.9%	0.6%	2.5%
More than 200 of Poverty	10,644	21,214	31,858	11,313	43,171	1,395	2,698	4,093	2,828	6,921	2.5%	4.8%	7.3%	5.0%	12.3%
Total	16,128	27,025	43,153	13,072	56,225	2,115	3,518	5,633	3,289	8,922	3.8%	6.3%	10.0%	5.8%	15.9%
Food Stamps Received															
No Food Stamps Received	6,606	7,405	14,011	1,920	15,931	405	475	880	259	1,139	0.7%	0.8%	1.6%	0.5%	2.0%
Food Stamps Received	514	448	962	137	1,099	147	133	280	58	338	0.3%	0.2%	0.5%	0.1%	0.6%
Unknown	9,009	19,173	28,182	11,015	39,197	1,563	2,911	4,474	2,972	7,446	2.8%	5.2%	8.0%	5.3%	13.2%
Total	16,129	27,026	43,155	13,072	56,227	2,115	3,519	5,634	3,289	8,923	3.8%	6.3%	10.0%	5.8%	15.9%
Welfare															
No Welfare or SSI	15,383	26,200	41,583	12,790	54,373	1,995	3,394	5,389	3,234	8,623	3.5%	6.0%	9.6%	5.8%	15.3%
Welfare or SSI Received	615	617	1,232	166	1,398	120	126	246	55	301	0.2%	0.2%	0.4%	0.1%	0.5%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,128	27,026	43,154	13,072	56,226	2,115	3,520	5,635	3,289	8,924	3.8%	6.3%	10.0%	5.8%	15.9%
Race of Head of Household															
White	13,410	23,050	36,460	11,387	47,847	1,687	2,745	4,432	2,845	7,277	3.0%	4.9%	7.9%	5.1%	12.9%
Black	1,724	2,019	3,743	574	4,317	218	330	548	149	697	0.4%	0.6%	1.0%	0.3%	1.2%
Hispanic	621	1,147	1,768	525	2,293	155	293	448	168	616	0.3%	0.5%	0.8%	0.3%	1.1%
Native American	52	78	130	56	186	13	30	43	2	45	0.0%	0.1%	0.1%	0.0%	0.1%
Asian	178	499	677	391	1,068	31	118	149	122	271	0.1%	0.2%	0.3%	0.2%	0.5%
Other	13	25	38	22	60	11	5	16	3	19	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,128	27,027	43,155	13,071	56,226	2,115	3,521	5,636	3,289	8,925	3.8%	6.3%	10.0%	5.8%	15.9%

Owner-Occupied Units continued

	All Owner-Occupied Units					Owner-Occupied Units: Children Under Six					Percent of Owner-Occupied Units: Children Under Six				
	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total	Pre-1950	1950-78	Pre-1978	1979-91	Total
Quality of Unit															
Adequate	14,723	25,622	40,345	12,579	52,924	1,871	3,285	5,156	3,144	8,300	3.3%	5.8%	9.2%	5.6%	14.8%
Moderately Inadequate	911	785	1,696	174	1,870	154	146	300	31	331	0.3%	0.3%	0.5%	0.1%	0.6%
Severely Inadequate	494	619	1,113	320	1,433	90	88	178	114	292	0.2%	0.2%	0.3%	0.2%	0.5%
Total	16,128	27,026	43,154	13,073	56,227	2,115	3,519	5,634	3,289	8,923	3.8%	6.3%	10.0%	5.8%	15.9%
Household Income Including Non-Relatives															
Zero or negative	164	217	381	83	464	10	18	28	7	35	0.0%	0.0%	0.0%	0.0%	0.1%
\$1-9999	2,218	2,170	4,388	454	4,842	114	101	215	34	249	0.2%	0.2%	0.4%	0.1%	0.4%
\$10000-19999	3,205	3,498	6,703	917	7,620	267	221	488	136	624	0.5%	0.4%	0.9%	0.2%	1.1%
\$20000-29999	2,933	4,441	7,374	1,641	9,015	319	484	803	328	1,131	0.6%	0.9%	1.4%	0.6%	2.0%
\$30000-39999	1,932	3,675	5,607	1,549	7,156	360	641	1,001	435	1,436	0.6%	1.1%	1.8%	0.8%	2.6%
\$40000-49999	1,590	3,085	4,675	1,757	6,432	323	561	884	537	1,421	0.6%	1.0%	1.6%	1.0%	2.5%
\$50000-59999	1,155	2,653	3,808	1,549	5,357	192	511	703	477	1,180	0.3%	0.9%	1.3%	0.8%	2.1%
\$60000 or more	2,802	7,078	9,880	5,006	14,886	529	982	1,511	1,334	2,845	0.9%	1.7%	2.7%	2.4%	5.1%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,129	27,026	43,155	13,072	56,227	2,114	3,519	5,633	3,288	8,921	3.8%	6.3%	10.0%	5.8%	15.9%
Family Income: Householder and relatives only															
Zero or negative	174	232	406	83	489	10	20	30	7	37	0.0%	0.0%	0.1%	0.0%	0.1%
\$1-9999	2,283	2,205	4,488	469	4,957	125	113	238	40	278	0.2%	0.2%	0.4%	0.1%	0.5%
\$10000-19999	3,244	3,541	6,785	956	7,741	272	220	492	141	633	0.5%	0.4%	0.9%	0.3%	1.1%
\$20000-29999	3,002	4,543	7,545	1,719	9,264	328	495	823	326	1,149	0.6%	0.9%	1.5%	0.6%	2.0%
\$30000-39999	1,912	3,711	5,623	1,555	7,178	352	618	970	436	1,406	0.6%	1.1%	1.7%	0.8%	2.5%
\$40000-49999	1,574	3,077	4,651	1,747	6,398	325	565	890	540	1,430	0.6%	1.0%	1.6%	1.0%	2.5%
\$50000-59999	1,125	2,585	3,710	1,545	5,255	188	514	702	471	1,173	0.3%	0.9%	1.2%	0.8%	2.1%
\$60000 or more	2,685	6,923	9,608	4,883	14,491	513	974	1,487	1,327	2,814	0.9%	1.7%	2.6%	2.4%	5.0%
Unknown	130	209	339	116	455	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total	16,129	27,026	43,155	13,073	56,228	2,113	3,519	5,632	3,288	8,920	3.8%	6.3%	10.0%	5.8%	15.9%
Monthly Housing Costs															
\$1-249	5,398	6,238	11,636	1,358	12,994	272	292	564	154	718	0.5%	0.5%	1.0%	0.3%	1.3%
\$250-499	4,329	6,811	11,140	1,723	12,863	460	521	981	268	1,249	0.8%	0.9%	1.7%	0.5%	2.2%
\$500-749	2,352	4,715	7,067	1,901	8,968	456	780	1,236	459	1,695	0.8%	1.4%	2.2%	0.8%	3.0%
More than \$750	2,625	6,696	9,321	6,536	15,857	692	1,584	2,276	2,048	4,324	1.2%	2.8%	4.0%	3.6%	7.7%
Unknown	1,424	2,565	3,989	1,556	5,545	235	342	577	361	938	0.4%	0.6%	1.0%	0.6%	1.7%
Total	16,128	27,025	43,153	13,074	56,227	2,115	3,519	5,634	3,290	8,924	3.8%	6.3%	10.0%	5.9%	15.9%
Value															
Under \$50000	5,822	4,697	10,519	1,074	11,593	797	654	1,451	268	1,719	1.4%	1.2%	2.6%	0.5%	3.1%
\$50000-100000	5,275	11,457	16,732	4,477	21,209	610	1,447	2,057	1,107	3,164	1.1%	2.6%	3.7%	2.0%	5.6%
\$100000-200000	3,121	7,190	10,311	4,984	15,295	429	943	1,372	1,288	2,660	0.8%	1.7%	2.4%	2.3%	4.7%
\$200000-250000	681	1,470	2,151	908	3,059	106	228	334	240	574	0.2%	0.4%	0.6%	0.4%	1.0%
More than \$250000	1,230	2,211	3,441	1,629	5,070	172	248	420	386	806	0.3%	0.4%	0.7%	0.7%	1.4%
Total	16,129	27,025	43,154	13,072	56,226	2,114	3,520	5,634	3,289	8,923	3.8%	6.3%	10.0%	5.8%	15.9%

NOTE: Any differences in the total number of units across variables are due to rounding.

Estimated Incremental Costs of Benchmark Standards for Sample Properties

B.1 INTRODUCTION

This appendix presents detailed assumptions and calculations to support the preliminary estimates of the incremental costs to residential properties under the Task Force's benchmark standards for lead-based paint maintenance and hazard control presented in Section 3.9 of Chapter 3. Incremental costs refer to activities required under the benchmark standards that a property owner is not already expected to perform. These estimates do not include the cost of regular maintenance, nor the cost of repairs to correct physical deficiencies, such as housing code violations. Because rental property owners have an existing legal obligation to provide housing that is maintained in accordance with local codes and other standards, the cost to bring a property into compliance with these requirements is not considered an incremental cost of the benchmark standards. As discussed in Chapter 3, the cost to repair physical deficiencies in standard units with extensive housing code violations can be substantial and this cost may far exceed the estimated cost of the benchmark standards.

The estimates presented in this section show the incremental costs for three sample rental properties — a single unit property and two multifamily properties (50 units and 200 units). Their purpose is to provide property owners and policymakers with a better understanding of the magnitude of the additional cost to various properties in meeting the standards. Because property characteristics and conditions vary widely, it was necessary to make arbitrary assumptions about a number of factors, such as unit size, unit turnover rates, and the extent of lead hazards in a unit. The estimates presented in this appendix should not be interpreted as detailed projections of the actual cost a given property will experience, but rather as a framework for illustrating the key factors influencing the cost of complying with the benchmark standards and how these costs vary with differences in property characteristics and compliance options.

These estimates were developed from information provided by lead-based paint hazard evaluation and control professionals and property owners, including members of the Task Force, and rely heavily on data from limited geographic areas (primarily Maryland and Georgia). As a result, the costs in a particular geographic area are likely to vary from the estimates presented here due to differences in local market conditions.

This appendix is organized as follows. The next section discusses the cost of lead-based paint inspections because having an inspection performed is an option available to any owner of a pre-1978 property. Section B.3 presents estimates of the incremental costs of meeting the elements of the standards that apply to lower priority properties. Section B.4 describes the cost to higher priority properties under the benchmark standards.

B.2 LEAD-BASED PAINT INSPECTION OPTION

Under the benchmark standards, owners of pre-1978 properties have the option of obtaining a lead-based paint inspection by a certified inspector to determine if their property contains lead-based paint (see Exhibit 3-1 in Chapter 3). As discussed in Chapter 1, current costs for a lead-based paint inspection for a single family property range from \$150 to \$600 per unit, depending on unit size and geographic area. These cost figures include the cost of XRF testing of all painted surfaces with a unique painting history and paint chip testing for surfaces that cannot be tested properly with an XRF analyzer.

To illustrate the cost of lead-based paint inspections for properties of different sizes, Exhibit B-1 presents estimates of the inspection costs under different unit sampling protocols for the three sample properties. The current lead-based paint inspection protocol for FHA-insured properties calls for 10 units to be inspected for any property with 20 or more units, regardless of size. While this protocol has been used by inspectors for several years, it was not designed to provide statistically reliable results. The cost of an inspection under a protocol that uses statistically-based unit sampling requirements designed to find randomly distributed lead-based paint with a confidence level of 95 percent is also estimated. (NOTE: If research shows that the presence of lead-based paint in multifamily properties follows some type of pattern that can be reliably determined, a smaller sample of units can be used because it will not be necessary to assume the random distribution of lead-based paint.) These figures illustrate how relying on a sample of units in multifamily properties lowers the average costs of inspections for owners of larger properties because they can allocate the total cost of the inspection over a larger number of units.

Exhibit B-1

Estimated LBP Inspection Costs

	No. of Units Inspected	Cost Per Unit Inspected	Total Cost	Overall Cost Per Unit ^c
Sample Single Unit Property	1	\$400	\$400	\$400
Sample 50-Unit Property				
FHA Inspection Protocol ^a	10	\$300	\$3,000	\$60
Alternate Protocol ^b	31	\$300	\$9,300	\$186
Sample 200-Unit Property				
FHA Inspection Protocol ^a	10	\$300	\$3,000	\$15
Alternate Protocol ^b	51	\$300	\$15,300	\$77

NOTES:

- a Unit sampling requirements based on the current inspection protocol for FHA-insured properties.
- b Unit sampling requirements based on an inspection protocol designed to achieve statistically reliable results with a 95 percent confidence level, assuming that lead-based paint is randomly distributed.
- c Total cost of the inspection divided by the number of units in the property.

B.3 INCREMENTAL COST TO LOWER PRIORITY RENTAL PROPERTIES

This section first discusses the incremental costs of meeting the three elements of the benchmark standards that apply to any pre-1978 property that is subject to the standards (either lower priority or higher priority) presented in Chapter 3:

- Essential Maintenance Practices (see Exhibit 3-2);
- Owner Response to an EBL Child (see Exhibit 3-3); and
- Control of Identified Hazards (see Exhibit 3-4).

(NOTE: All pre-1978 zero-bedroom and elderly units without young children, pre-1978 properties found by a certified inspector not to contain lead-based paint, and properties that have had all lead-based paint abated are exempt from the benchmark standards.) It then presents estimates of the incremental costs for lower priority properties, which are subject only to these three elements of the benchmark standards.

A. Essential Maintenance Practices.

Essential Maintenance Practices are the actions shown in Exhibit 3-2 that property owners need to incorporate into regular property maintenance activities. The following cost estimates do not include the cost of regular maintenance, but rather the additional cost of performing maintenance work in a manner that complies with the requirements for Essential Maintenance Practices. For example, the estimates for safely repairing deteriorated paint reflect the cost of using safe work practices and performing specialized cleaning of the work area, but do not include the cost of the work to repair the paint because it is considered a regular maintenance activity.

The estimated incremental costs of the activities required under Essential Maintenance Practices as presented in Exhibit 3-2 are described below:

- *Visual Examination for Deteriorated Paint.* The incremental cost of the required visual examination reflects the time spent by the owner or the owner's staff to walk through a unit once a year to examine painted surfaces for the presence of more than a de minimis amount of deteriorated paint and then document the results of the examination. Based on the assumption that the examination and any write-up would not take longer than a total of 30 minutes to complete, the estimated incremental cost would be \$5 to \$10 per unit each year. (NOTE: Many property owners perform annual inspections for deteriorated paint, regardless of the presence of lead. For these owners, there would be no incremental cost increase for visual examinations.)
- *Safe Work Practices and Safe Repair of Deteriorated Paint.* Essential Maintenance Practices require property owners to use safe work practices when performing repairs in a unit and to repair deteriorated paint when more than a de minimis amount is present. The incremental cost of these two elements consists of the additional time and materials involved in using safe work practices and the cost of specialized cleaning of the work area.

The incremental cost of safely correcting deteriorated paint is estimated to be minimal and generally should not exceed \$10 per repair project, or \$20 per unit for routine turnover work. These estimates include the additional time spent by workers to use safe work practices and ensure that debris is not spread beyond the work area. The figures do not include the cost of the repair work to correct deteriorated paint or the cost of protective coverings for the work area, because both are assumed to be costs that would be incurred as part of a property's regular maintenance activities.

The incremental cost of using safe work practices when performing other types of repairs to a unit will vary according to the nature of the repair, but again are generally expected to be minimal. Repairs that do not disturb paint will have no incremental cost. Projects, such as repairs to broken wall surfaces, on average, are expected to have incremental costs similar to the estimated range for correcting deteriorated paint. Again, the basic cost of the repair is considered a regular maintenance cost and only the costs associated with safe work practices have been included in the estimate.

As discussed in Section 3.9, the incremental cost of specialized cleaning using a two-step protocol (HEPA vacuum followed by a wet wash with a lead-specific detergent) is estimated to be \$0.30 per square foot multiplied by the size of the work area. This estimate reflects the additional cost of using specialized cleaning practices when workers clean-up after repairs are completed. At unit turnover, the amount of area that requires specialized cleaning will depend on the extent of repairs performed. Units that require modest repairs in several locations or extensive repairs in a few rooms will need specialized cleaning in only a portion of the living area. If extensive repairs are performed throughout the unit, the entire unit becomes the work area and will need specialized cleaning. If future research validates the effectiveness of cleaning protocols that simply incorporate the use of a lead-specific detergent into regular cleaning practices, the incremental cost of specialized cleaning is estimated to drop to \$0.05 per square foot.

(NOTE: Many owners are currently paying higher amounts for specialized cleaning — sometimes as high as \$0.70 per square foot. However, these costs are based on a protocol that includes a second HEPA vacuuming and reflect locations where there is limited competition among providers. These figures also reflect total cleaning costs rather than incremental costs.)

- *Provide Lead-Based Paint Hazard Information to Tenants.* This element of Essential Maintenance Practices involves no incremental cost because federal regulations implementing the notification provisions of Title X will require rental property owners to provide this information to tenants.

- *Post Lead-Based Paint Notice.* The posting and maintenance of the required notice could be performed by existing staff as part of their regular activities with very little additional effort or cost to the owner.
- *Train Maintenance Staff.* The incremental cost of this element includes the fee for the property manager or maintenance supervisor to attend a suitable training course and one day of that person's time. It also includes the cost of having the manager or supervisor provide training to any maintenance workers. The estimated average cost of training for the manager or maintenance supervisor would be \$350 (approximately \$200 for the course fee and \$150 salary costs for one day of a staff person's time). It is assumed that training for maintenance workers could be done in-house and completed in one half-day. The estimated incremental costs would include the salary costs for a half-day of each worker's time and the time of the staff person conducting the training. The cost of worker training will vary depending on the size of a property's maintenance staff. If the manager/supervisor and maintenance staff remain in their jobs for more than one year, the cost of this training could be allocated over time.

B. Response to an EBL Child and Control of Identified Hazards.

The other two elements of the benchmark standards that apply to all pre-1978 rental properties involve actions that are required in the event the owner is notified of the presence of an EBL child or when lead-based paint hazards have been identified. The Task Force believes that Essential Maintenance Practices will greatly reduce the likelihood of an EBL child or lead-based paint hazards in lower priority properties and, therefore, that most of these properties generally will not incur the cost of the actions required by these two standards. Thus, for most properties that are not considered higher priority, the cost of complying with the benchmark standards is the incremental cost of Essential Maintenance Practices as detailed above.

In the event a property owner is notified of the presence of an EBL child, the benchmark standards require that the owner obtain a risk assessment, unless:

- the local health department has conducted an environmental investigation and the property owner has responded to any health department directives to control lead-based paint hazards in the unit; or
- the property is already covered by valid documentation of compliance issued by an independent, certified individual.

If neither condition applies, the owner must pay for a risk assessment. As discussed in Chapter 1, the cost to have a risk assessment performed in a single family property using composite dust testing is estimated to range from \$200 to \$500, while

the cost of risk assessment for a single unit in a multifamily property is generally 30 percent less. The cost to perform a risk assessment in an average single family property is estimated to be \$375. An estimate of the cost to obtain a comparable risk assessment for an average two-bedroom apartment is \$260. Both estimates will vary with the size of the unit and geographic area. (NOTE: The estimates assume the use of composite dust tests. If local requirements do not allow composite dust testing, this cost will be greater due to the higher cost of collecting single surface dust samples.) If the risk assessment finds no lead-based paint hazards, the property owner is not required to take additional action.

If lead-based paint hazards in a unit are identified, either as a result of the investigation of an EBL child or based on the results of a lead-based paint hazard evaluation performed for other reasons, the cost of hazard control directly depends upon the scope and severity of the hazards. For example, if the only lead-based paint hazard identified is elevated dust lead levels, the principal hazard control cost would be specialized cleaning of the unit. If extensive amounts of deteriorated paint must be stabilized or other treatments are required, the cost of hazard control would be higher.

C. Incremental Costs to Sample Lower Priority Properties

To illustrate the incremental cost of the benchmark standards for lower priority properties, the following tables show how the preceding estimates of the incremental cost of Essential Maintenance Practices might apply to: a sample single unit rental property (see Exhibit B-2); a sample 50-unit rental property (see Exhibit B-3); and a sample 200-unit property (see Exhibit B-4).

The sample properties are assumed to be in moderately good physical condition (no serious housing code violations), but do require regular repairs to adequately maintain the units. Many properties in good condition will require less maintenance work and will have lower costs, while older properties that require more frequent maintenance will have higher costs.

In developing the estimates, it was assumed that the multifamily properties have an annual unit turnover rate of 50 percent with all units turning over in five years. It is assumed that the single unit property turns over once every 18 months. Properties that have lower turnover rates will have lower costs, while those that turn over more frequently will have higher costs.

Finally, as discussed in Section 3.9 of Chapter 3, the estimates of the incremental cost of Essential Maintenance Practices are based on the two scenarios for specialized cleaning performed at routine unit turnovers described below.

Scenario A: Essential Maintenance Practices require specialized cleaning of the work area when painted surfaces are disturbed or deteriorated paint is repaired. Because

routine work at unit turnover will not require paint repairs in every room of every unit and not every unit will be completely repainted at every unit turnover, this scenario assumes that, on average, specialized cleaning of one-third of the unit's square footage is performed at unit turnover. This scenario also assumes the use of a two-step specialized cleaning protocol (one HEPA vacuum and one wet wash with a lead-specific detergent) at an average incremental cost of \$0.30 per square foot.

Scenario B: Alternatively, if the effectiveness of regular vacuuming and one wet mop with a specialized cleanser (e.g., the protocol evaluated in a recent Canadian Study¹) is proven to be effective in removing lead dust, then the incremental cost of specialized cleaning under Essential Maintenance Practices would be very low — roughly \$0.05 per square foot. This scenario assumes that this type of low-cost specialized cleaning protocol is substituted for conventional cleaning methods at unit turnover and that the entire unit is cleaned. The reduced cleaning cost under this type of protocol makes it possible to clean the *entire* unit and still achieve important cost savings (approximately 50 percent) compared with Scenario A.

It should be noted that the Task Force has not endorsed any specific specialized cleaning protocol, and further research is recommended to validate the effectiveness of various cleaning methods under a range of conditions.

The estimates show that larger properties, or any property that can use in-house maintenance staff to perform the required work, will tend to have lower incremental costs.

B.4 INCREMENTAL COST TO HIGHER PRIORITY RENTAL PROPERTIES

This section presents estimates of the incremental costs of the benchmark standards that apply to higher priority properties. These estimates include the expense of meeting Essential Maintenance Practices, as well as the additional hazard control requirements discussed in Chapter 3 that apply only to higher priority properties, either:

- Risk Assessment/Hazard Control (Section 3-7); or
- Standard Treatments (Section 3-8).

Under the benchmark standards, it must be emphasized that owners of higher priority properties select *only one* of these two hazard control options.

A. Risk Assessment/Hazard Control.

These costs apply to owners of higher priority rental properties that choose to perform risk assessments and control identified lead hazards, rather than performing Standard Treatments.

Exhibit B-2

Estimated Incremental Costs for Sample Single Unit Lower Priority Property^a

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
Essential Maintenance Practices									
A. Visual Examinations ^f									
■ No. of Units		1	1	1	1	1			
■ Cost	\$10	\$10	\$10	\$10	\$10	\$10	\$50	\$10	\$100
B. Routine Turnover ^g									
■ No. of Units		1	1	0	1	1			
■ Cost	\$70-110	\$70-110	\$70-110	\$0	\$70-110	\$70-110	\$280-440	\$42-66	\$490-770
C. Repair Projects ^h									
■ No. of Repairs		1	1	1	1	1			
■ Cost	\$25	\$25	\$25	\$25	\$25	\$25	\$125	\$25	\$250
D. Staff Training ⁱ									
		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost(A+B+C+D) ^j		\$105-145	\$105-145	\$35	\$105-145	\$105-145	\$455-615	\$77-101	\$840-1,120
Average Annual Cost ^k Per Property Per Unit									\$84-112
									\$84-112

NOTES:

- a A single unit rental property that is subject to the benchmark standards, but is not considered a higher priority property. Unit contains 1,000 square feet of living area. Repairs and maintenance work are performed by an outside contractor.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Unit examined annually. Base cost of \$10 per unit assumes 30 minute exam at a labor cost of \$20/hour.
- g Unit turns over once every two years. The incremental cost of using safe work practices when preparing vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$50/unit (\$0.05/sq.ft. X 1,000 sq.ft.) for a base cost of \$70/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
- h On average, one repair project that disturbs more than a de minimis amount of paint is performed annually in the unit at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq. ft. work area]).
- i Unit turnover work and repairs are performed by trained contractor. No training cost to owner.
- j Lower figure shows the estimated total incremental cost assuming that specialized cleaning at unit turnover is performed using the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173).
- k Average annual cost per property reflects the total ten-year costs (in 1995 dollars) divided by ten.

Exhibit B-3

Estimated Incremental Costs for Sample 50-Unit Lower Priority Property^a

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
Essential Maintenance Practices									
A. Visual Examinations ^f									
■ No. of Units		50	50	50	50	50			
■ Cost	\$5	\$250	\$250	\$250	\$250	\$250	\$1,250	\$250	\$2,500
B. Routine Turnover ^g									
■ No. of Units		25	25	25	25	25		25	
■ Cost	\$65-110	\$1,625-2,750	\$1,625-2,750	\$1,625-2,750	\$1,625-2,750	\$1,625-2,750	\$8,125-13,750	\$1,625-2,750	\$16,250-27,500
C. Repair Projects ^h									
■ No. of Repairs		25	25	25	25	25			
■ Cost	\$25	\$625	\$625	\$625	\$625	\$625	\$3,125	\$625	\$6,250
D. Staff Training ⁱ									
		\$500	\$150	\$500	\$150	\$500	\$1,800	\$290	\$3,250
Total Cost(A+B+C+D) ^j		\$3,000-4,125	\$2,650-3,775	\$3,000-4,125	\$2,650-3,775	\$3,000-4,125	\$14,300-19,925	\$2,790-3,915	\$28,250-39,500
Average Annual Cost ^k Per Property									\$2,825-3,950
Per Unit									\$57-79

NOTES:

- A 50-unit rental property that is subject to the benchmark standards, but is not considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- Every unit examined annually. Base cost of \$5 per unit assumes 20 minute exam at a labor cost of \$15/hour.
- Assumes half the units turn over annually. The incremental cost of using safe work practices when preparing vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$45/unit (\$0.05/sq.ft. X 875 sq.ft.) for a base cost of \$65/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
- On average, 25 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq. ft. work area]).
- Training costs assume that the manager and maintenance worker must be trained every two years due to staff turnover at a cost of \$500 (\$350 for manager and \$150 for worker).
- Lower figure shows the estimated total incremental cost assuming that specialized cleaning at unit turnover is performed using the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173).
- Average annual cost per property reflects the ten-year total costs (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property costs divided by the total number of units in the property.

Exhibit B-4

Estimated Incremental Costs for Sample 200-Unit Lower Priority Property^a

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
Essential Maintenance Practices									
A. Visual Examinations ^f									
■ No. of Units		200	200	200	200	200			
■ Cost	\$5	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$10,000
B. Routine Turnover ^g									
■ No. of Units		100	100	100	100	100			
■ Cost	\$65-110	\$6,500-11,000	\$6,500-11,000	\$6,500-11,000	\$6,500-11,000	\$6,500-11,000	\$32,500-55,000	\$6,500-11,000	\$65,000-110,000
C. Repair Projects ^h									
■ No. of Repairs		100	100	100	100	100			
■ Cost	\$25	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$12,500	\$2,500	\$25,000
D. Staff Training ⁱ									
		\$600	\$250	\$600	\$250	\$600	\$2,300	\$390	\$4,250
Total Cost(A+B+C+D) ^j		\$10,600-15,100	\$10,250-14,750	\$10,600-15,100	\$10,250-14,750	\$10,600-15,100	\$52,300-74,800	\$10,390-14,890	\$104,250-149,250
Average Annual Cost ^k Per Property									\$10,425-14,925
Per Unit									\$52-75

NOTES:

- A 200-unit rental property that is subject to the benchmark standards, but is not considered a higher priority property. Units contain an average of 875 square feet of living area. There is a maintenance supervisor and two workers.
- The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- Every unit examined annually. Base cost of \$5 per unit assumes 20 minute exam at a labor cost of \$15/hour.
- Assumes half the units turn over annually. The incremental cost of using safe work practices when preparing vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$45/unit (\$0.05/sq.ft. X 875 sq.ft.) for a base cost of \$65/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
- On average, 100 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq. ft. work area]).
- Training costs assume that the maintenance supervisor is trained every two years at a cost of \$350 per training and the workers must be trained by the supervisor every year due to staff turnover at a cost of \$250.
- Lower figure shows the estimated total incremental cost assuming that specialized cleaning at unit turnover is performed using the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173).
- Average annual cost per property reflects the ten-year total costs (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property costs divided by the total number of units in the property.

- **Risk Assessment.** As discussed in Chapter 1, the cost of a risk assessment for a single family unit using composite dust tests can range from \$200 to \$500, depending on the number of rooms. In multifamily properties, the cost per unit evaluated is approximately two-thirds the cost for a single family unit because the units tend to be smaller and the fixed costs can be allocated across multiple units. A risk assessment in an average single family property is estimated to cost \$375, while the cost for an average two-bed room apartment is estimated to be \$260. Follow-up evaluations generally require less time and are estimated to cost 80 percent of the amount of the initial risk assessment. In multifamily properties, risk assessments are based on evaluations of a sample of units in the property. Therefore, the cost to a property is determined by multiplying the number of units actually evaluated by the cost per unit. (NOTE: The Task Force assumes the use of composite dust tests. If local requirements do not allow composite dust tests, this cost will be greater due to the higher cost of single surface sampling.)
- **Lead Hazard Screen.** A lead hazard screen — an abbreviated risk assessment for units in good condition — is estimated to cost \$150 to \$300 per unit for single family properties. As is true for risk assessments, lead hazard screens in multifamily buildings are less costly for the same reasons.
- **Control of Lead-Based Paint Hazards.** As discussed in Chapter 1, the hazard control costs for a unit will vary depending upon the types of hazards present. Hazard control costs are comparable to the cost estimates for similar types of work discussed under Standard Treatments (such as paint stabilization and treating friction surfaces). To the extent that properties containing lead-based paint hazards require abatement to achieve effective hazard control, the initial cost will be higher because certified contractors must be used.
- **Lead Hazard Control Plan.** Owners of properties where a risk assessment has identified lead hazards also have the option of having a risk assessor develop a Lead Hazard Control Plan, which focuses lead hazard control activities on a subset of units (for example, the proportion of units that have historically been occupied by households with a young child). The concept of a Lead Hazard Control Plan has only recently been developed by this Task Force in an effort to provide flexibility to owners of multifamily properties. Because these plans are not yet widely available in the marketplace, estimates of the cost to obtain a plan are speculative at this point in time.

The cost of a Lead Hazard Control Plan is the work to have a risk assessor prepare the plan once a risk assessment has been completed. This involves gathering and analyzing infor-

mation about the property, such as occupancy by households with a young child, and writing the plan. Because much of the work to prepare a plan involves fixed costs, they tend to be more cost-effective as the size of the property increases. Initial information suggests that the cost of a plan may range from 50 to 100 percent of the cost of the risk assessment. Because Lead Hazard Control Plans help owners target hazard controls on a subset of units, this additional up-front investment can be a valuable, cost-effective means for some owners to comply with the standards.

Property owners may find it advantageous to obtain a lead-based paint inspection to inform the design of their Lead Hazard Control Plan. The inspection results enable owners to better target their lead hazard control activities by treating only those surfaces found to contain lead-based paint, thereby reducing their lead hazard control costs.

B. Standard Treatments.

Under the benchmark standards, owners of higher priority properties have the option of getting a risk assessment and controlling identified hazards or undertaking Standard Treatments. Standard Treatments are hazard control activities designed to be performed as part of regular maintenance and repairs normally conducted at unit turnover (see Exhibit 3-6). The following estimates of the incremental costs of these activities reflect the additional cost of meeting the requirements of Standard Treatments, but not the cost of activities that a property owner would perform as part of a project's regular maintenance. In many cases, these estimates reflect the cost of performing the initial Standard Treatments in a unit. After the initial treatments have been performed in a unit, the cost of subsequent treatments typically will be lower because the work only involves maintaining the initial treatments.

- **Repair of Deteriorated Paint.** This Standard Treatment activity is quite similar to the safe repair of deteriorated paint required under Essential Maintenance Practices, except that all surfaces with deteriorated paint, even de minimis amounts, are corrected and the work is generally performed in a vacant unit. Like Essential Maintenance Practices, the incremental cost of repairs to deteriorated paint involves the additional time and materials necessary to follow safe work practices, but not the cost of repair work which is considered a regular maintenance cost. Because this work takes place in a larger work area (i.e., the whole unit) and is likely to involve more than one worker, it is assumed that the amount of time spent by workers ensuring that debris is not spread beyond the work area and the costs for protective clothing are likely to be higher than the per project cost discussed under Essen-

tial Maintenance Practices. As a result, the average incremental cost of this treatment is estimated to range from \$15 to \$40 per unit. Of course, the actual incremental cost for a given unit will depend upon the amount of work that needs to be performed. The average incremental cost for larger units and those that require extensive work at turnover may be higher, while smaller units and those that require less work may have lower costs.

- *Providing Smooth and Cleanable Horizontal Surfaces.* Under Standard Treatments, horizontal surfaces need to be made smooth and cleanable. This requirement will primarily affect older units with wood windows and floors. The Task Force expects that the incremental cost of this requirement will primarily involve repairs to pitted window sills. The average cost of covering and sealing a window sill to make it smooth and cleanable is estimated to be \$25 per window. The actual cost to a property will depend upon the number of windows that need treatment and the extent of the work required. Hard floors are another surface that needs to be kept smooth and cleanable. However, just as existing housing codes require that painted surfaces be maintained, they also specify that hard-surfaced floors (i.e., those without wall-to-wall carpeting) must be kept in good condition. Therefore, there is no incremental cost estimated for this requirement under the benchmark standards. (Estimates of the cost to make hard-surfaced floors smooth and cleanable range from \$0.40 to \$2.00 per square foot.)
- *Correcting Painted Surfaces that are Rubbing, Binding or Being Crushed.* The Task Force expects that this requirement will generally involve the treatment of friction surfaces on painted doors to prevent the generation of lead dust. For binding doors, the cost to remove the door, properly plane the affected surface, and reinstall the door is estimated to be \$35 per treated door. If the door must also be rehung, the cost could increase to \$45 to \$50 per door. In some cases, the door may need to be replaced, which may cost \$100. The actual cost to a property will depend upon the number of doors and other components that bind or crush paint. In most cases, these treatments will only need to be done once to a component and therefore would not be included in the cost of subsequent treatments to a unit.
- *Specialized Cleaning.* Unlike Essential Maintenance Practices, the full unit receives specialized cleaning following Standard Treatments. Specialized cleaning after Standard Treatments is estimated to cost \$0.30 per square foot when performed by in-house staff in larger properties and \$0.35 per square foot by outside contractors in smaller properties. These estimates assume the use of a two-step

protocol where floors are first cleaned with a special vacuum to remove lead dust and then wet-cleaned using a lead-specific detergent. As noted in Section 3.9 of Chapter 3, some owners are currently paying higher fees for specialized cleaning. In Chapter 11, the Task Force recommends research to examine the effectiveness of lower cost cleaning protocols.

- *Dust Testing.* Under the standards, dust tests initially must be performed at the completion of Standard Treatments in every unit. Dust tests are estimated to cost \$70 per unit tested given current methods and laboratory costs. This figure assumes that the three composite samples are collected by the owner's staff and sent to a certified laboratory for analysis (\$10 per unit for staff time to collect dust samples and \$60 in laboratory costs to analyze three composite dust wipes). (NOTE: The Task Force is recommending the use of composite dust tests. If local requirements do not allow composite dust testing, this cost will be greater due to the higher cost of single surface sampling.) Thus, the initial incremental cost of dust testing for a given property will be determined by the cost per unit multiplied by the number of units that turn over and any occupied units where Standard Treatments must be performed.

Once property owners can demonstrate that units cleaned by their work crews consistently pass dust tests, the benchmark standards allow the owner to rely on dust tests performed in a sample of treated units, reducing the cost of dust testing for a property. If an owner is seeking liability limitation or other recognition of compliance with the standards, dust testing costs will be higher. To qualify for liability limitation, dust testing must be performed by a certified risk assessor or inspector. The cost for independent dust testing is estimated to range from \$100 to \$150 per unit and would need to be conducted in every unit upon completion of Standard Treatments.

- *Restricting Access to Bare Soil.* Standard Treatments require controls to prevent occupant exposure to bare soil. The types of properties that will most commonly be affected by this requirement are those with exposed dirt pathways and play areas that have exposed soil. The incremental cost of this treatment will be the work necessary to install a protective covering over areas of bare soil (for example, a barrier material with a soil covering, asphalt, or rubber mats). For areas that receive frequent use (for example, play areas), the cost to treat exposed soil by covering the area with a durable permeable barrier and clean soil is estimated to average \$1.25 per square foot for the initial treatment. This method has a lower initial cost than more permanent treatments, such as asphalt, but requires ongoing

inspections and replenishment. For areas with bare soil that receive little use, strategies such as seeding with grass, planting natural barriers, or covering the affected area with sod, gravel, or mulch would reduce the cost.

C. Incremental Costs for Sample Higher Priority Properties

To illustrate the costs of meeting the benchmark standards for higher priority properties, estimates of the cost of required lead hazard controls (risk assessment/hazard control or Standard Treatments) and Essential Maintenance Practices were developed for a sample single unit rental property (see Exhibit B-5); a sample 50-unit rental property (see Exhibit B-6); and a sample 200-unit property (see Exhibit B-7). Exhibits B-6 and B-7 also include estimates of the cost of Lead Hazard Control Plans for the sample 50-unit and 200-unit properties, since the benchmark standards offer this option to owners of multifamily properties.

The estimates for these sample higher priority units are based on the same assumptions regarding property condition, unit size, and unit turnover used in developing the estimates for lower priority units (see Section B.3). Specialized cleaning following lead hazard controls or Standard Treatments is assumed to be performed using the two-step cleaning protocol described in Scenario A with an incremental cost of \$0.30 per square foot, while the cost of Essential Maintenance Practices at unit turnover is estimated using both specialized cleaning scenarios (Scenarios A and B) described in Section B.3.

Estimated Incremental Costs for Sample Single Unit Higher Priority Property^a (Two Options)

Table A
Option #1: Risk Assessment/Hazard Control

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
1. Risk Assessment^f		\$375		\$300		\$300	\$975	\$0	\$975
2. Hazard Control^g									
A. Unit Turnover									
■ No. of Units		0	0	0	0	0		0	
■ Control Cost	\$610	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. Unit w/Child < 6									
■ No. of Units		1	0	0	0	0		0	
■ Control Cost	\$610	\$610	\$0	\$0	\$0	\$0	\$610	\$0	\$610
Haz. Control Cost(A+B)		\$610	\$0	\$0	\$0	\$0	\$610	\$0	\$610
3. Essential Maintenance Practices^h									
A. Visual Examinations									
■ No. of Units		1	1	1	1	1		1	
■ Cost	\$10	\$10	\$10	\$10	\$10	\$10	\$50	\$10	\$100
B. Routine Turnover									
■ No. of Units		0	1	0	1	1			
■ Cost	\$70-110	\$0	\$70-110	\$0	\$70-110	\$70-110	\$210-330	\$42-66	\$420-660
C. Repair Projects									
■ No. of Repairs		1	1	1	1	1		1	
■ Cost	\$25	\$25	\$25	\$25	\$25	\$25	\$125	\$25	\$250
D. Staff Training		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EMP Cost(A+B+C+D)		\$35	\$145	\$35	\$145	\$145	\$505	\$101	\$1,010
Total Cost(1+2+3)ⁱ		\$1,020	\$105-145	\$335	\$105-145	\$405-445	\$1,970-2,090	\$77-101	\$2,355-2,595
Average Annual Costⁱ									
Per Property									\$236-260
Per Unit									\$236-260

Exhibit B-5, Table A continued

NOTES:

- a A single unit rental property that is subject to the benchmark standards for higher priority properties. Contains 1,000 square feet of living area. Repairs and maintenance work are performed by an outside contractor.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Assumes that an initial risk assessment using composite dust sampling is performed at a cost of \$375 and modest lead hazards are identified. Follow-up evaluations are performed in Years 3 and 5 at 80 percent of the cost of the initial risk assessment (\$300). The property passes both follow-up evaluations
- g Lead hazard control work is performed in the unit during Year 1 at a cost of \$610.
- h Essential Maintenance Practices:
Visual Exams. Unit examined annually. Base cost of \$10 per unit assumes 30 minute exam at a labor cost of \$20/hour.
Routine Turnover. Unit turns over once every two years. The incremental cost of safe work practices when preparing the vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$50/unit (\$0.05/sq.ft. X 1,000 sq.ft.) for a base cost of \$70/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
Repair Projects. On average, one repair project that disturbs more than a de minimis amount of paint is performed annually in the unit at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30 sq.ft. X 50 sq.ft. work area]).
Staff Training. Unit turnover work and repairs are performed by trained contractor. No training cost to owner.
- i Lower figures show the estimated total incremental cost assuming that the cost of specialized cleaning at unit turnover for Essential Maintenance Practices is based on the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173). If only one estimate is shown, the total incremental cost to the property is the same regardless of the specialized cleaning protocol used.
- j Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten.

Estimated Incremental Costs for Sample Single Unit Higher Priority Property^a (Two Options)

Table B
Option #2: Standard Treatments

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
1. Standard Treatments^f									
A. Initial Treatments									
Unit Turnover									
■ No. of Units		1	0	0	0	0		0	
■ Control Cost	\$655/590	\$655	\$0	\$0	\$0	\$0	\$655	\$0	\$655
Unit with Child < 6									
■ No. of Units		0	0	0	0	0		0	
■ Control Cost	\$590	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. Subseq. Treatments									
Unit Turnover									
■ No. of Units		0	1	0	1	1		1	
■ Control Cost	\$375	\$0	\$375	\$0	\$375	\$375	\$1,125	\$225	\$2,250
Treatment Cost(A+B)		\$655	\$375	\$0	\$375	\$375	\$1,780	\$225	\$2,905
2. Essential Maintenance Practices^g									
A. Visual Examinations									
■ No. of Units		1	1	1	1	1		1	
■ Cost	\$10	\$10	\$10	\$10	\$10	\$10	\$50	\$10	\$100
B. Routine Turnover									
■ No. of Units		0	0	0	0	0		0	
■ Cost	\$70-110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Repair Projects									
■ No. of Repairs		1	1	1	1	1		1	
■ Cost	\$25	\$25	\$25	\$25	\$25	\$25	\$125	\$25	\$250
D. Staff Training		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EMP Cost(A+B+C+D)		\$35	\$35	\$35	\$35	\$35	\$175	\$35	\$350
Total Cost(1+2)		\$690	\$410	\$35	\$410	\$410	\$1,955	\$260	\$3,255
Average Annual Cost^h									
Per Property									\$326
Per Unit									\$326

Exhibit B-5, Table B continued

NOTES:

- a A single unit rental property that is subject to the benchmark standards for higher priority properties. Contains 1,000 square feet of living area. Repairs and maintenance work are performed by an outside contractor.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Unit is assumed to turn over once every two years. The incremental cost when Standard Treatments are performed for the first time in a unit (initial treatments) is assumed to be \$655 for the first 20 units where every unit receives a dust test and \$590/unit for initial treatments in subsequent units assuming that the proficiency of the cleaning crew has been established and dust testing is then performed randomly in 10 percent of the units treated. The incremental cost of subsequent Standard Treatments in the unit is assumed to be \$375/unit.
- g Essential Maintenance Practices:
 - Visual Exams.* Unit examined annually. Base cost of \$10 per unit assumes 30 minute exam at a labor cost of \$20/hour.
 - Routine Turnover.* Because the unit receives Standard Treatments whenever it turns over, there is no incremental cost for Essential Maintenance Practices at unit turnover.
 - Repair Projects.* On average, one repair project that disturbs more than a de minimis amount of paint is performed annually in the unit at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq. ft. work area]).
 - Staff Training.* Unit turnover work and repairs are performed by trained contractor. No training cost to owner.
- h Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten.

Estimated Incremental Costs for Sample 50-Unit Higher Priority Property^a (Three Options)

Table A
Option #1: Risk Assessment/Hazard Control

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^f	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
1. Risk Assessment^f		\$2,600		\$2,100		\$2,100	\$6,800	\$0	\$6,800
2. Hazard Control^g									
A. Unit Turnover									
■ No. of Units		20	10	6	3	1		0	
■ Control Cost	\$565	\$11,300	\$5,650	\$3,390	\$1,695	\$565	\$22,600	\$0	\$22,600
B. Unit w/Child < 6									
■ No. of Units		10	0	0	0	0		0	
■ Control Cost	\$565	\$5,650	\$0	\$0	\$0	\$0	\$5,650	\$0	\$5,650
Haz. Control Cost(A+B)		\$16,950	\$5,650	\$3,390	\$1,695	\$565	\$28,250	\$0	\$28,250
3. Essential Maintenance Practices^h									
A. Visual Examinations									
■ No. of Units		50	50	50	50	50		50	
■ Cost	\$5	\$250	\$250	\$250	\$250	\$250	\$1,250	\$250	\$2,500
B. Routine Turnover									
■ No. of Units		0	15	19	22	24		25	
■ Cost	\$65-110	\$0	\$975-1,650	\$1,235-2,090	\$1,430-2,420	\$1,560-2,640	\$5,200-8,800	\$1,625-2,750	\$13,325-22,550
C. Repair Projects									
■ No. of Repairs		25	25	25	25	25		25	
■ Cost	\$25	\$625	\$625	\$625	\$625	\$625	\$3,125	\$625	\$6,250
D. Staff Training		\$500	\$150	\$500	\$150	\$500	\$1,800	\$290	\$3,250
EMP Cost(A+B+C+D)		\$1,375	\$2,675	\$3,465	\$3,445	\$4,015	\$14,975	\$3,915	\$34,550
Total Cost(1+2+3)ⁱ		\$20,925	\$7,650-8,325	\$8,100-8,955	\$4,150-5,140	\$5,600-6,680	\$46,425-50,025	\$2,790-3,915	\$60,375-69,600
Average Annual Costⁱ Per Property									\$6,038-6,960
Per Unit									\$121-139

Exhibit B-6, Table A continued

NOTES:

- a A 50-unit rental property that is subject to the benchmark standards and is considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Assumes that an initial risk assessment using composite dust sampling is performed at a cost of \$2,600 (a sample of ten units is evaluated at a cost of \$260/unit evaluated) and modest lead hazards are identified. Follow-up evaluations are performed in Years 3 and 5 at 80 percent of the cost of the initial risk assessment (\$2,100). The property passes both follow-up evaluations.
- g Lead hazard controls are performed promptly in units occupied by households with a child under age 6 and at unit turnover among the remaining units. In Year 1, half of the ten units with a young child turnover, as well as 20 additional units for a total of 30 units receiving treatment. In Years 2 through 5, units that did not receive hazard control work in Year 1 are treated as they turnover. The average cost of lead hazard control work performed in each unit is \$565.
- h Essential Maintenance Practices:
Visual Exams. All units examined annually. Base cost of \$5 per unit assumes 20 minute exam at labor cost of \$15/hour.
Routine Turnover. Assumes half the units turn over annually (25 units). In Years 2 through 5, units that turn over and have already undergone lead hazard control still have the incremental cost of Essential Maintenance Practices. The incremental cost of safe work practices when preparing the vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$45/unit (\$0.05/sq.ft. X 875 sq.ft.) for a base cost of \$65/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
Repair Projects. On average, 25 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq.ft. work area]).
Staff Training. Training costs assume that the manager and maintenance worker must be trained every two years due to staff turnover at a cost of \$500 (\$350 for manager and \$150 for worker).
- i Lower figures show the estimated total incremental cost assuming that the cost of specialized cleaning at unit turnover for Essential Maintenance Practices is based on the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173). If only one estimate is shown, the total incremental cost to the property is the same regardless of the specialized cleaning protocol used.
- j Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property cost divided by the total number of units in the property.

Estimated Incremental Costs for Sample 50-Unit Higher Priority Property^a (Three Options)

Table B
Option #2: Risk Assessment/Lead Hazard Control Plan

Estimated Incremental Costs ^b									
	Base Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
1. Risk Assessment/LHCP ^f									
A. Risk Assessment		\$2,600		\$2,100		\$2,100	\$6,800	\$0	\$6,800
B. LHCP		\$2,500					\$2,500	\$0	\$2,500
RA/LHCP Cost (A+B)		\$5,100		\$2,100		\$2,100	\$9,300	\$0	\$9,300
2. Hazard Controls ^g									
A. Unit with Child < 6									
■ No. of Units		11	1	1	1	1			
■ Control Cost	\$565	\$6,215	\$565	\$565	\$565	\$565	\$8,475	\$0	\$8,475
B. Initial Controls		\$2,000					\$2,000		\$2,000
Haz. Control Cost(A+B)		\$8,215	\$565	\$565	\$565	\$565	\$10,475	\$0	\$10,475
3. Essential Maintenance Practices ^h									
A. Visual Examinations									
■ No. of Units		50	50	50	50	50		50	
■ Cost	\$5	\$250	\$250	\$250	\$250	\$250	\$1,250	\$250	\$2,500
B. Routine Turnover									
■ No. of Units		19	24	24	24	24		25	
■ Cost	\$65-110	\$1,235-2,090	\$1,560-2,640	\$1,560-2,640	\$1,560-2,640	\$1,560-2,640	\$7,475-12,650	\$1,625-2,750	\$15,600-26,400
C. Repair Projects									
■ No. of Repairs		25	25	25	25	25		25	
■ Cost	\$25	\$625	\$625	\$625	\$625	\$625	\$3,125	\$625	\$6,250
D. Staff Training		\$500	\$150	\$500	\$150	\$500	\$1,800	\$290	\$3,250
EMP Cost(A+B+C+D)		\$3,465	\$3,665	\$4,015	\$3,665	\$4,015	\$18,825	\$3,915	\$38,400
Total Cost(1+2+3) ⁱ		\$15,925-16,780	\$3,150-4,230	\$5,600-6,680	\$3,150-4,230	\$5,600-6,680	\$33,425-38,600	\$2,790-3,915	\$47,375-58,175
Average Annual Cost Per Property									
									\$4,738-5,818
Per Unit									
									\$95-116

Exhibit B-6, Table B continued

NOTES:

- a A 50-unit rental property that is subject to the benchmark standards and is considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Assumes that an initial risk assessment using composite dust sampling is performed at a cost of \$2,600 (a sample of ten units is evaluated at a cost of \$260/unit evaluated) and modest lead hazards are identified. Follow-up evaluations are performed in Years 3 and 5 at 80 percent of the cost of the initial risk assessment (\$2,100). The property passes both follow-up evaluations. A Lead Hazard Control Plan is also prepared in Year 1 at an estimated cost of \$2,600.
- g Lead hazard controls are performed promptly in the historical percentage of units occupied by households with a child under age 6. The historical percentage of units with a child under age six is assumed to be 20 percent (10 units). Because hazard controlled units may not always be immediately available at the time they are needed for a new tenant with a young child, it is assumed that one additional unit receives lead hazard control work in Years 1 through 5. The average cost of lead hazard control work performed in each unit is \$565.
- h Essential Maintenance Practices:
Visual Exams. All units examined annually. Base cost of \$5 per unit assumes 20 minute exam at labor cost of \$15/hour.
Routine Turnover. Assumes half the units turn over annually (25 units). In Years 2 through 5, units that turn over and have already undergone lead hazard control still have the incremental cost of Essential Maintenance Practices. The incremental cost of safe work practices when preparing the vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$45/unit (\$0.05/sq.ft. X 875 sq.ft.) for a base cost of \$65/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
Repair Projects. On average, 25 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq.ft. work area]).
Staff Training. Training costs assume that the manager and maintenance worker must be trained every two years due to staff turnover at a cost of \$500 (\$350 for manager and \$150 for worker).
- i Lower figures show the estimated total incremental cost assuming that the cost of specialized cleaning at unit turnover for Essential Maintenance Practices is based on the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173). If only one estimate is shown, the total incremental cost to the property is the same regardless of the specialized cleaning protocol used.
- j Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property cost divided by the total number of units in the property.

Estimated Incremental Costs for Sample 50-Unit Higher Priority Property^a (Three Options)

Table C
Option #3: Standard Treatments

Estimated Incremental Costs ^b									
Activity	Base Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
1. Standard Treatments ^f									
A. Initial Treatments									
Unit Turnover									
■ No. of Units		25	10	5	3	25		0	
■ Control Cost	\$610	\$14,350	\$5,500	\$2,750	\$1,650	\$1,100	\$25,350	\$0	\$25,350
Unit with Child < 6									
■ Number of Units		0	5	0	0	0		0	
■ Control Cost	\$550	\$0	\$2,750	\$0	\$0	\$0	\$2,750	\$0	\$2,750
B. Subseq. Treatments									
Unit Turnover									
■ No. of Units		0	12	20	22	23		25	
■ Control Cost	\$335	\$0	\$4,020	\$6,700	\$7,370	\$7,705	\$25,795	\$8,375	\$67,670
Treatment Cost(A+B)		\$14,350	\$12,270	\$9,450	\$9,020	\$8,805	\$53,895	\$8,375	\$95,770
2. Essential Maintenance Practices ^g									
A. Visual Examinations									
■ No. of Units		50	50	50	50	50		50	
■ Cost	\$5	\$250	\$250	\$250	\$250	\$250	\$1,250	\$250	\$2,500
B. Routine Turnover									
■ No. of Units		0	0	0	0	0		0	
■ Cost	\$65-110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Repair Projects									
■ No. of Repairs		25	25	25	25	25		25	
■ Cost	\$25	\$625	\$625	\$625	\$625	\$625	\$3,125	\$625	\$6,250
D. Staff Training									
		\$500	\$150	\$500	\$150	\$500	\$1,800	\$290	\$3,250
EMP Cost(A+B+C+D)		\$1,375	\$1,025	\$1,375	\$1,025	\$1,375	\$6,175	\$1,165	\$12,000
Total Cost(1+2)		\$15,725	\$13,295	\$10,825	\$10,045	\$10,180	\$60,070	\$9,540	\$107,770
Average Annual Cost ^h									
Per Property									\$10,777
Per Unit									\$216

Exhibit B-6, Table C continued

NOTES:

- a A 50-unit rental property that is subject to the benchmark standards and is considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Fifty percent of the units in the property (25 units) are assumed to turn over annually. The incremental cost when Standard Treatments are performed for the first time in a unit (initial treatments) is assumed to be \$610 for the first 20 units where every unit receives a dust test and \$550/unit for initial treatments in subsequent units assuming that the proficiency of the cleaning crew has been established and dust testing is then performed randomly in 10 percent of the units treated. The incremental cost of subsequent Standard Treatments in units that have received initial treatments is assumed to be \$335/unit.
- g Essential Maintenance Practices:
 - Visual Exams.* All units examined annually. Base cost of \$5 per unit assumes 20 minute exam at labor cost of \$15/hour.
 - Routine Turnover.* Because all units that turn over receive Standard Treatments, there is no incremental cost for Essential Maintenance Practices at unit turnover.
 - Repair Projects.* On average, 25 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq.ft. work area]).
 - Staff Training.* Training costs assume that the manager and maintenance worker must be trained every two years due to staff turnover at a cost of \$500 (\$350 for manager and \$150 for worker).
- h Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property cost divided by the total number of units in the property.

Estimated Incremental Costs for Sample 200-Unit Higher Priority Property^a (Three Options)

Table A
Option #1: Risk Assessment/Hazard Control

Activity	Base Cost	Estimated Incremental Costs ^b					Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
		Year 1	Year 2	Year 3	Year 4	Year 5			
1. Risk Assessment^f		\$5,200		\$4,200		\$4,200	\$13,600	\$0	\$13,600
2. Hazard Control^g									
A. Unit Turnover									
■ No. of Units		80	30	25	15	10		0	
■ Control Cost	\$520	\$41,600	\$15,600	\$13,000	\$7,800	\$5,200	\$83,200	\$0	\$83,200
B. Unit w/Child < 6									
■ No. of Units		40	0	0	0	0		0	
■ Control Cost	\$520	\$20,800	\$0	\$0	\$0	\$0	\$20,800	\$0	\$20,800
Haz. Control Cost(A+B)		\$62,400	\$15,600	\$13,000	\$7,800	\$5,200	\$104,000	\$0	\$104,000
3. Essential Maintenance Practices^h									
A. Visual Examinations									
■ No. of Units		200	200	200	200	200		200	
■ Cost	\$5	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$10,000
B. Routine Turnover									
■ No. of Units		0	70	75	85	90		100	
■ Cost	\$65-100	\$0	\$4,550-7,700	\$4,875-8,250	\$5,525-9,350	\$5,850-9,900	\$20,800-35,200	\$6,500-11,000	\$53,300-90,200
C. Repair Projects									
■ No. of Repairs		100	100	100	100	100		100	
■ Cost	\$25	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$12,500	\$2,500	\$25,000
D. Staff Training		\$600	\$250	\$600	\$250	\$600	\$2,300	\$390	\$4,250
EMP Cost(A+B+C+D)		\$4,100	\$11,450	\$12,350	\$13,100	\$14,000	\$55,000	\$14,890	\$129,450
Total Cost(1+2+3)ⁱ		\$71,700	\$23,900-27,050	\$26,175-29,550	\$17,075-20,900	\$19,350-23,400	\$158,200-172,600	\$10,390-14,890	\$210,150-247,050
Average Annual Costⁱ Per Property									\$21,015-24,705
Per Unit									\$105-124

Exhibit B-7, Table A continued

NOTES:

- a A 200-unit rental property that is subject to the benchmark standards and is considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Assumes that an initial risk assessment using composite dust sampling is performed at a cost of \$5,200 (a sample of 20 units is evaluated at a cost of \$260/unit evaluated) and modest lead hazards are identified. Follow-up evaluations are performed in Years 3 and 5 at 80 percent of the cost of the initial risk assessment (\$4,200). The property passes both follow-up evaluations.
- g Lead hazard controls are performed promptly in units occupied by households with a child under age 6 and at unit turnover among the remaining units. In Year 1, half of the 40 units with a young child turnover, as well as 20 additional units for a total of 120 units receiving treatment. In Years 2 through 5, units that did not receive hazard control work in Year 1 are treated as they turnover. The average cost of lead hazard control work performed in each unit is \$520.
- h Essential Maintenance Practices:
Visual Exams. All units examined annually. Base cost of \$5 per unit assumes 20 minute exam at labor cost of \$15/hour.
Routine Turnover. Assumes half the units turn over annually (100 units). In Years 2 through 5, units that turn over and have already undergone lead hazard control still have the incremental cost of Essential Maintenance Practices. The incremental cost of safe work practices when preparing the vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$45/unit (\$0.05/sq.ft. X 875 sq.ft.) for a base cost of \$65/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
Repair Projects. On average, 100 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq.ft. work area]).
Staff Training. Training costs assume that the maintenance supervisor is trained every two years at a cost of \$350 per training and the workers must be trained by the supervisor every year due to staff turnover at a cost of \$250.
- i Lower figures show the estimated total incremental cost assuming that the cost of specialized cleaning at unit turnover for Essential Maintenance Practices is based on the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173). If only one estimate is shown, the total incremental cost to the property is the same regardless of the specialized cleaning protocol used.
- j Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property cost divided by the total number of units in the property.

Estimated Incremental Costs for Sample 200-Unit Higher Priority Property^a (Three Options)

Table B
Option #2: Risk Assessment/Lead Hazard Control Plan

Estimated Incremental Costs ^b									
	Base Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total 5-Year Cost ^f	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
Activity									
1. Risk Assessment/LHCP ^f									
A. Risk Assessment		\$5,200		\$4,200		\$4,200	\$13,600	\$0	\$13,600
B. LHCP		\$5,000					\$5,000	\$0	\$5,000
RA/LHCP Cost (A+B)		\$10,200		\$4,200		\$4,200	\$18,600	\$0	\$18,600
2. Hazard Controls ^g									
A. Unit with Child < 6									
■ Units w/Child < 6		45	5	5	5	0			
■ Treatment Cost	\$520	\$23,400	\$2,600	\$2,600	\$2,600	\$0	\$31,200	\$0	\$31,200
B. Initial Controls		\$5,000					\$5,000		\$5,000
Haz. Control Cost(A+B)		\$28,400	\$2,600	\$2,600	\$2,600	\$0	\$36,200	\$0	\$36,200
3. Essential Maintenance Practices ^h									
A. Visual Examinations									
■ No. of Units		200	200	200	200	200		200	
■ Cost	\$5	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$10,000
B. Routine Turnover									
■ No. of Units		55	95	95	95	100		100	
■ Cost	\$65-110	\$3,575-6,050	\$6,175-10,450	\$6,175-10,450	\$6,175-10,450	\$6,500-11,000	\$28,600-48,400	\$6,500-11,000	\$61,100-103,400
C. Repair Projects									
■ No. of Repairs		100	100	100	100	100		100	
■ Cost	\$25	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$12,500	\$2,500	\$25,000
D. Staff Training		\$600	\$250	\$600	\$250	\$600	\$2,300	\$390	\$4,250
EMP Cost(A+B+C+D)		\$10,150	\$14,200	\$14,550	\$14,200	\$15,100	\$68,200	\$14,890	\$142,650
Total Cost(1+2+3) ⁱ									
		\$46,275-48,750	\$12,525-16,800	\$17,075-21,350	\$12,525-16,800	\$14,800-19,300	\$103,200-123,000	\$10,390-14,890	\$155,150-197,450
Average Annual Cost Per Property									
									\$15,515-19,745
Per Unit									
									\$78-99

Exhibit B-7, Table B continued

NOTES:

- a A 200-unit rental property that is subject to the benchmark standards and is considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Assumes that an initial risk assessment using composite dust sampling is performed at a cost of \$5,200 (a sample of 20 units is evaluated at a cost of \$260/unit evaluated) and modest lead hazards are identified. Follow-up evaluations are performed in Years 3 and 5 at 80 percent of the cost of the initial risk assessment (\$4,200). The property passes both follow-up evaluations. A Lead Hazard Control Plan is also prepared in Year 1 at an estimated cost of \$5,200.
- g Lead hazard controls are performed promptly in the historical percentage of units occupied by households with a child under age 6. The historical percentage of units with a child under age six is assumed to be 20 percent (40 units). Because hazard controlled units may not always be immediately available at the time they are needed for a new tenant with a young child, it is assumed that 20 additional units receive lead hazard control work in Years 1 through 5. The average cost of lead hazard control work performed in each unit is \$520.
- h Essential Maintenance Practices:
Visual Exams. All units examined annually. Base cost of \$5 per unit assumes 20 minute exam at labor cost of \$15/hour.
Routine Turnover. Assumes half the units turn over annually (100 units). In Years 2 through 5, units that turn over and have already undergone lead hazard control still have the incremental cost of Essential Maintenance Practices. The incremental cost of safe work practices when preparing the vacant unit for reoccupancy is assumed to be \$20/unit. The lower estimate assumes that specialized cleaning is performed using the protocol under Scenario B (see page 173) at an incremental cost of \$45/unit (\$0.05/sq.ft. X 875 sq.ft.) for a base cost of \$65/unit. The higher estimate assumes that specialized cleaning is performed using the protocol under Scenario A (see page 173) at an incremental cost of \$90/unit (\$0.30/sq.ft. X 300 sq.ft.) for a base cost of \$110/unit.
Repair Projects. On average, 100 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq.ft. work area]).
Staff Training. Training costs assume that the maintenance supervisor is trained every two years at a cost of \$350 per training and the workers must be trained by the supervisor every year due to staff turnover at a cost of \$250.
- i Lower figures show the estimated total incremental cost assuming that the cost of specialized cleaning at unit turnover for Essential Maintenance Practices is based on the protocol under Scenario B, while the higher figure assumes the use of the protocol under Scenario A (see page 173). If only one estimate is shown, the total incremental cost to the property is the same regardless of the specialized cleaning protocol used.
- j Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property cost divided by the total number of units in the property.

Estimated Incremental Costs for Sample 200-Unit Higher Priority Property^a (Three Options)

Table C
Option #3: Standard Treatments

Estimated Incremental Costs ^b									
Activity	Base Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total 5-Year Cost ^c	Average Annual Cost Years 6-10 ^d	Total 10-Year Cost ^e
1. Standard Treatments ^f									
A. Initial Treatments									
Unit Turnover									
■ No. of Units		100	40	25	10	5			
■ Control Cost	\$570	\$51,800	\$20,200	\$12,625	\$5,050	\$2,525	\$92,200	\$0	\$92,200
Unit with Child < 6									
■ No. of Units		0	20	0	0	0			
■ Control Cost	\$505	\$0	\$10,100	\$0	\$0	\$0	\$10,100	\$0	\$10,100
B. Subseq. Treatments									
Unit Turnover									
■ No. of Units		0	50	75	90	95			
■ Control Cost	\$290	\$0	\$14,500	\$21,750	\$26,100	\$27,550	\$89,900	\$23,200	\$205,900
Treatment Cost(A+B)		\$51,800	\$44,800	\$34,375	\$31,150	\$30,075	\$192,200	\$23,200	\$308,200
2. Essential Maintenance Practices ^g									
A. Visual Examinations									
■ No. of Units		200	200	200	200	200		200	
■ Cost	\$5	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	\$1,000	\$10,000
B. Routine Turnover									
■ No. of Units		0	0	0	0	0		0	
■ Cost	\$65-110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Repair Projects									
■ No. of Repairs		100	100	100	100	100		100	
■ Cost	\$25	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$12,500	\$2,500	\$25,000
D. Staff Training									
		\$600	\$250	\$600	\$250	\$600	\$2,300	\$390	\$4,250
EMP Cost(A+B+C+D)		\$4,100	\$3,750	\$4,100	\$3,750	\$4,100	\$19,800	\$3,890	\$39,250
Total Cost(1+2)		\$55,900	\$48,550	\$38,475	\$34,900	\$34,175	\$212,000	\$27,090	\$347,450
Average Annual Cost ^h									
Per Property									\$34,745
Per Unit									\$174

Exhibit B-7, Table C continued

NOTES:

- a A 200-unit rental property that is subject to the benchmark standards and is considered a higher priority property. Units contain an average of 875 square feet of living area. There is an on-site manager and a part-time maintenance worker.
- b The cost of activities required under the benchmark standards that a property owner is not already expected to perform. These estimates are presented only to provide an initial understanding of the magnitude of the costs and should not be interpreted as definitive projections of expected costs. The actual costs for a given property will vary due to differences in property characteristics, conditions, local costs and local implementation of the benchmark standards.
- c Total incremental costs to the property for Years 1 through 5 in 1995 dollars.
- d Total incremental costs to the property for Years 6 through 10 divided by five in 1995 dollars.
- e Total incremental costs to the property for Years 1 through 10 in 1995 dollars.
- f Fifty percent of the units in the property (100 units) are assumed to turn over annually. The incremental cost when Standard Treatments are performed for the first time in a unit (initial treatments) is assumed to be \$570 for the first 20 units where every unit receives a dust test and \$505 unit for initial treatments in subsequent units assuming that the proficiency of the cleaning crew has been established and dust testing is then performed randomly in 10 percent of the units treated. The incremental cost of subsequent Standard Treatments in units that have received initial treatments is assumed to be \$290/unit.
- g Essential Maintenance Practices:
 - Visual Exams. All units examined annually. Base cost of \$5 per unit assumes 20 minute exam at labor cost of \$15/hour.
 - Routine Turnover. Because all units that turn over receive Standard Treatments, there is no incremental cost for Essential Maintenance Practices at unit turnover.
 - Repair Projects. On average, 100 repair projects that disturb more than a de minimis amount of paint are performed annually in the property at an incremental cost of \$25/unit (\$10/project for safe work practices and \$15/project for specialized cleaning [\$0.30/sq.ft. X 50 sq.ft. work area]).
 - Staff Training. Training costs assume that the maintenance supervisor is trained every two years at a cost of \$350 per training and the workers must be trained by the supervisor every year due to staff turnover at a cost of \$250.
- h Average annual cost to property reflects the ten-year total cost (in 1995 dollars) divided by ten. Average cost per unit reflects the annual property cost divided by the total number of units in the property.

Additional Views

Maurci Jackson

I do not think that parents of poisoned children were adequately represented on the Task Force. Out of a Task Force with 40 members, only one parent was originally named. I was added to the Task force so late in the process that I could not vote on many of the issues since I didn't get to participate in the earlier discussions.

Almost all the discussion at Task Force meetings and in the final report is about property owners, insurance companies, banks, owners, realtors, and contractors. Everyone seems to forget the real reason for this Task Force: to protect *children* from lead poisoning—to prevent the *human tragedy* of lead poisoning. As the parent of a poisoned child, I know the pain of that tragedy first hand. Across the country there are hundreds of thousands of families whose stories would touch your heart and you could feel their pain and frustration. I know that lead-based paint is a “problem” to landlords, bankers, insurance companies, health departments, etc. But, no one can truly understand and know what a problem lead paint really is until its *your* child who gets poisoned.

I understand that the Task Force worked hard to make the benchmark standards low enough cost so that property owners can afford to do them, but standards that are not tight enough to protect children from lead poisoning don't help our children. I am truly concerned about the Task Force's decision not to require all maintenance workers to get at least the one-day training (only the supervisors), which in my opinion is still inadequate. My daughter Maurissa would not have been poisoned a second time had it not been for hazards created by untrained workers. I wonder if my other daughter Maurita would not have been poisoned at all? I urge cities and states and insurance companies to require worker training. I urge landlords to see that their workers get this training. And I urge workers to get in training—for the sake of all our children, yours and mine.

Our children have borne the brunt of the lead poisoning epidemic and it is they who are of the utmost importance. Every standard put forth must be done with our children in mind. I hope that the points I have made are considered when people implement the standards and design state and local programs to truly *prevent* lead poisoning. I also write this in hopes that it will inspire landlords, government agencies, banks and insurance companies to implement the benchmark standards. Without full implementation, this report's recommendations are just words on paper.

I include my family's story, in hopes everyone will understand the seriousness of lead poisoning and will work toward prevention. I also want to make it clear that the responsibility of childhood lead poisoning *cannot* be put on the parent. The notion that if parents just watched their children better and cleaned their homes, childhood lead poisoning would go away is far fetched. Every child has the right to live in a lead safe environment. Parents are not the culprits — the hazards that release lead are. My story about how lead poisoning changes a family puts a face on this problem.

When my daughter Maurissa was approximately 15 months old she came to me with a paint chip in her hand and said, “Mommy I ate this.” There was paint chip residue in and around her mouth and she was spitting, trying to get it out of her mouth. I immediately took her into the bathroom and began to rinse her mouth out. The next morning we were the first in line at the doctors office. I knew I had to have her checked and was told she needed a lead test. I didn't know the paint on the walls of our apartment was a danger to Maurissa. This information I have never received, from anyone, at any time.

When the results came back from Maurissa's lead test, her blood level was three times higher than what CDC guidelines consider to be lead poisoned. Maurissa was given chelation therapy, two shots per day for 3-5 days, with a needle that seemed to go on forever. Because her level rose again after each therapy, this process went on for approximately 8 months. After about a year, we thought we had finally gotten past this lead poisoning ordeal. Maurissa's level finally was down and stayed below 25µg/dl. But this was only the beginning.

The landlord hired workers to come in and fix the peeling lead-based paint. Different workers came in different crews over several days to scrape the paint off the walls in Maurissa's bedroom. My initial reaction was that this was good—if the paint chips were removed they would no longer be accessible to my daughter. I had no knowledge of how the removal should be done or how to safeguard Maurissa from further poisoning. The workers ended up knocking out some of the walls completely and putting up new drywall and repainting. They left a mess and didn't clean up. I was pregnant at the time with my second child, Maurita. I vacuumed every day, but I did not know about the dangers of lead dust. I did not know that neither Maurissa nor I should have been in our home.

Fortunately, Maurissa had a doctor appointment in the midst of all this. When the test results were returned, her doctor called me and asked, “What are you doing?!!” I explained that the landlord’s workers were fixing the lead-based paint, scraping and knocking out walls. I then received the education I should have received a long time before. Maurissa’s doctor told me to move out right then and there—immediately. My home was completely contaminated with lead dust. Even though I took every possible precaution to make sure Maurissa never ate another piece of paint, she was being poisoned by the lead dust. Instead of helping, my vacuuming was probably only making things worse. When I dusted my table tops, I wasn’t using any moisture to pick the lead dust up. I used a feather duster which again put the lead back into the air. It suddenly became clear why we had spent over eight months trying to get Maurissa’s blood lead level down and it continued to rise.

Maurissa’s lead level was now almost five times higher than the acceptable level. All the efforts put into reducing her blood lead level the year before had just gone out the window. I felt like I was on a roller coaster ride that I couldn’t get off. Only to add that my unborn daughter may be born with lead poisoning. I became furious. Why were there lead hazards in my apartment? Why weren’t the workers trained? Why did they make it worse? Why wasn’t I given information about lead poisoning to protect my daughter? Why had my life become a lead nightmare? I put some clothes in a duffle bag and moved back home with my mother, leaving everything else behind: furniture, clothes, and most importantly Maurissa’s stuffed animal collection. Her doctor told me if I took my belongings with me, I’d be traveling with lead dust which would continue to poison Maurissa.

When Maurissa had to return to the doctor for the chelation shots again, it took three nurses to hold her down while the fourth nurse administered the shots. One nurse looked at me and said, “Mother hold her head”. Maurissa let out a scream I had never heard in my or her life before or since. She looked at me and asked, “MOMMY WHY?” I looked at the tears running down her face and her nose was fire red and realized I didn’t have an answer. I had promised her a year before that once we got through her initial bout with lead poisoning we would never have to deal with those shots again. I felt the bond between a mother and child had just been broken. Maurissa always looked for me to be her protector and she no longer felt that protection. I felt that I had lied to her because I did not have the information I needed to protect her and keep her safe from lead poisoning. Not only had she been poisoned once, but two separate times. I looked back at Maurissa and said “Mommy doesn’t know why, but mommy will find out”.

I went on to start Parents Against Lead in Chicago. After meeting with other parents of lead poisoned children, we realized that we could get organized to work together and really influence change. In Chicago, parents and landlords now receive the same information about lead paint and dust hazards. Three years later Parents Against Lead has a very good relationship with both our city and state health departments.

In May 1994 the Alliance assisted me and several parents from around the country in getting to their national conference. Parents got together and decided to form UPAL (United Parents Against Lead), a national network organization dedicated to fighting for the elimination of lead poisoning to safeguard children from this entirely preventable disease. Parents from around the United States came together to form a national network for parents of lead poisoned children to have a unified voice for change. Too often the people who are directly affected by a problem are not included in the solution. Lead poisoning is an entirely preventable disease, but for many parents like myself the issue of lead poisoning does not hit home until their own child has been poisoned.

Maurissa’s lead poisoning changed our whole lives. Even with this knowledge I am still scared. I have no idea where we’re going or where we will end up. I know what is possible because Maurissa’s lead level was high, but I pray and hope that we will get through this and that effects on her will be minimal. I know because of lead poisoning, she and almost two million other children have lost IQ points. I can’t help but wonder if any of these children may have found a cure to cancer or AIDS and how much will the loss of these IQ points really affect them. I look at Maurissa and Maurita and pray they will both be alright. I fight in hopes that in my lifetime, I will actually see an end to childhood lead poisoning.

Parents must be told about lead dust and how to protect their children. But that is only part of it. If we are going to prevent this disease, then laws have got to change, landlords have to keep the paint intact, workers must be trained, and the government has to help pay for controlling lead hazards in the homes of low-income families. I don’t want any other parent or child to go through what Maurissa and I have gone through.

Michael D. Lappin

I am a Task Force member and President of the Community Preservation Corporation (CPC). The Community Preservation Corporation, founded in 1974, is a non-profit New York City lender providing rehabilitation, construction and long term financing for affordable housing in New York City and New York State. It has supplied loans for more than 39,000 apartments. Most of CPC’s investments are in older apartment buildings.

The Task Force mandate included many topics. One of the most important, I believe, was to present informed recommendations to local governments on measures to curb lead hazards in privately owned housing. In a group as large and diverse as the Task Force, any final recommendations are a compromise. The Task Force has weighed the issues thoroughly and judiciously, and I believe its recommendations present a reasoned balance of a wide range of views. Compromise recommendations, however, because they are intended to apply to numerous and diverse situations, will fit some well and others less well.

I believe this may be the case in the application of certain of the Task Force recommendations to localities where aging, occupied properties provide the bulk of housing for low and moderate income residents. In these localities, the imperatives of limited budgets are acutely pressing. While this pressure may be relieved by an adequate supply of public subsidies, as the Task Force recommends, it may unfortunately be true in many localities that adequate subsidy will not be forthcoming. In such cases, localities could sensibly introduce a degree of flexibility that, while not contained in some Task Force recommendations, is consistent with their reasoning and their intent. This separate statement is intended as a caution to such localities, and a suggestion concerning this flexibility.

The Task Force recommends sets of actions to be taken by owners of certain classes of housing. These include low cost Essential Maintenance Practices, applicable to all housing. Here, I think the Task Force has taken a commendable step towards wide adherence to the Essential Maintenance Practices by excluding a recommendation for dust testing, whose costs and administrative burdens would have deterred acceptance of this maintenance standards.

The Task Force also recommends that more extensive obligations be imposed on “higher priority” housing. “Higher priority” is a designation to be made by state or city officials; it is intended to comprise properties where hazards are believed probable or prevalent. The added costs of the obligations recommended for housing designated as “higher priority” are quite substantial. Local officials face an especially difficult challenge in targeting their hazard evaluation and control efforts and available subsidies in a manner that simultaneously protects children from lead hazards and preserves the economic viability of the affordable housing stock.

I would emphasize, as does the Task Force Report, that “higher priority” housing be limited to housing in which hazards are believed highly likely to be present. This determination is to rest on local knowledge of the types of lead hazards and their distribution that are known (or soundly believed) to pertain in a given locality. The Task Force’s references to pre-1950 construction as a “benchmark” from which localities begin to

shape a definition of “higher priority” should not be construed to gather all older housing within the definition, and subject it to a additional costs and obligations. Much pre-1950 housing, if well maintained in accordance with the Essential Maintenance Practices, will furnish safe and affordable housing. It is undeserving of the stigma and costly obligations that would follow a “higher priority” designation. In many New York City neighborhoods, housing of pre-1950 construction, in fact, comprises the majority of the stock and neither children’s health nor the long term interests of residents would be served by across-the-board imposition of investment-draining obligations on housing that is merely old, but possesses no other indicators of probable lead hazards. The Task Force report properly urges localities to consider numerous factors in addition to age of construction in reaching determinations on the “higher priority” definition. The need for this careful analysis and empirical investigation is especially crucial in urban communities.

My second cautionary observation pertains to the range of obligations to be imposed on “higher priority” housing. The Task Force, accommodating widely varying viewpoints, recommend an integrated set of procedures under the heading of “Standard Treatments.” I agree that, if a locality has properly designed the classes of “higher priority” housing and, further, can supply and deliver adequate resources to pay for them in its affordable housing stock, a set of measures similar to the Standard Treatments is desirable. The Task Force properly notes in Chapter 11 the need for additional research on numerous topics, including the effectiveness and duration of various remedies, low cost alternatives, and so on. Significant changes in the Standard Treatments “recipe” may be suggested by this future research.

The desirability of mandating Standard Treatments must be predicated on the locality’s assurance of adequate resources to pay for them. For much low income housing, this means assuring subsidies and the means of getting them to targeted buildings. This is a major qualification. In practical terms, it is unfortunately highly likely - indeed almost certain - that economically distressed housing in some localities will require remediation for which public subsidy in adequate amounts will not be available. The costs involved may be quite substantial: estimation of them will be difficult until experience is obtained, but Task Force estimates range up to possibly tens of thousands of dollars in older properties.

In this situation, enactment of the full Standard Treatments into local law would have the worst possible results, namely, widespread non-compliance in buildings unable to afford them without subsidies. Localities facing this dilemma, I

believe, would act sensibly and reasonably by picking the most important from among the Standard Treatments and make the implementation of these a priority to the limits of the insufficient local resources. It now seems clear, for instance, that it is always beneficial to perform wet scraping of damaged paint, and to clean up dust. These measures, I would urge, should be implemented even if there are insufficient resources to pay for the other measures. To the extent funds and subsidies are more plentiful, a locality could reasonably add other obligations.

To the extent that additional subsidy - or other resources - are available, tradeoffs of this sort become less and less confining. While resources remain severely limited, however, I believe that localities best preserve children's health by implementing these most effective measures to prevent hazards that can be paid for within the strained economics of low income housing. The possible dilemma of affordability - and the need for tradeoffs - should be faced explicitly. To be avoided is a loose definition of "higher priority" and an imposition on economically marginal projects of costly obligations for which adequate funds do not exist. This applies with equal force on any measures to require mortgage lenders to incorporate defined standards into their underwriting. A wide range of possible lead hazards in economically viable housing can be curbed with minimal cost in the course of normal maintenance and capital improvements funded by normal equity and mortgage investment. Simple and low cost rules targeted to these possible hazards will effect remediation that is wide in extent. Laws and regulations must achieve this integration of low cost hazard control with the standards of investment underwriting.

Dennis Livingston

I want to emphasize the importance of three points that relate directly to the Task Force's benchmark standards and other recommendations.

First, both policy makers and practitioners must understand that interim controls can only be effective where the substrate is sound. Where the plaster or wood's failing, the hazard must be abated. The failed surface must be removed or enclosed, as most current building codes already require.

Second, I believe that it is crucial that all workers who break lead surfaces as part of their professional work receive at least one day of basic training on lead-based paint hazards. This will, at the very least, increase their awareness of lead hazards and let them know when a certified worker needs to be on the job site.

Finally, we must recognize that residential environmental problems are interrelated. For example, moisture problems can cause lead-based paint to fail, undermine weatherization improvements, and cause respiratory disease. It is crucial from a health, housing, and cost perspective to solve residential environmental problems as a whole.

Kenneth G. Peters

I would like to observe for the record that the comments I have made and the votes I have cast in the course of the Task Force's deliberations have represented my personal views on these issues, and not the official views of Freddie Mac. For that reason, while Freddie Mac views lead hazards as a significant problem and will, I know, review the report and the Task Force's recommendations with great interest, my participation in these proceedings and in the development of this report should not be construed as binding Freddie Mac in any way.

Charles S. Wilkins, Jr.

I believe that the Task Force's Standard Treatments are inappropriately intensive for application in all pre-1950 housing. Had the Task Force been able to develop a "higher priority" definition that combined pre-1950 status with an objective, reliable indicator of poor maintenance, I believe that our Standard Treatments would have been appropriate for that subset of the stock which is relatively small.

A substantial portion of pre-1950 housing, by contrast, is well maintained and is relatively unlikely to contain lead hazards. For well maintained pre-1950 housing, I believe that one-time specialized cleaning plus future adherence to Essential Maintenance Practices would be an appropriate hazard control regimen. The initial specialized cleaning would eliminate lead dust hazards (if any) due to past work practices, and ongoing Essential Maintenance Practices would guard against the creation of lead hazards in the future.

I believe that the NHANES III data, as well as anecdotal evidence from the Task Force's public hearing and meetings, support my conclusion that lead hazards, in general, are associated with a combination of two factors: (1) significant amounts of lead-based paint; plus (2) poor maintenance or unsafe renovation. Housing that combines these two factors is the proper target population for Standard Treatments. However, in the context of all pre-1950 housing, the Task Force's Standard Treatments are a more intensive intervention than I believe is called for.

Thank you Cushing for your exceptional work in chairing the Task Force, and for your contribution toward creating the Task Force's sound and comprehensive final report.

Dissenting Views

Lucy Billings, George Gould,
Ellen Silbergeld, Helen Walker

We comprise the representatives of tenants or of families at risk of lead poisoning and the only environmental health scientist on a Task Force dominated by real estate, insurance, and government agency interests. The only other tenant and parent representative submits a much needed view complementing and amplifying ours. The Title X legislation established this HUD-EPA Task Force to advise the agencies on how to implement effective standards and procedures for preventing lead-based paint poisoning. This effort is not new. In 1971 Congress enacted the Lead-Based Paint Poisoning Prevention Act, and in 1978 the federal government banned paint containing more than 0.06% lead by weight from use in residences. We conclude with sadness that the current Task Force report certainly does not advance our nation's efforts to prevent lead-based paint poisoning and may well pull those efforts many years backward. Although the report does contain points we can endorse, we cannot embrace it as a whole and particularly the central recommendations on standards and liability.

Several themes permeate the Task Force report. One is that property owners do not comply with current requirements because they are unclear. This premise is simply incorrect in our experience. Even after a child has been poisoned, many owners just ignore specific requirements imposed by the health department. This inaction has nothing to do with uncertainty as to what is required, but more to do with owners' refusals to spend the money to make the necessary corrections in their dwelling units.

A second fundamental concern is the Task Force's adoption of standards and strategies in the absence of any research that shows they will in fact protect children. Task Force members were unwilling to admit the basic facts of the hazard lead-based paint poses and only offered unsubstantiated claims that requiring even moderate hazard abatement was an impossible burden. Development of the standards has given in to those real estate, insurance, and government agency interests whose goal is to minimize the money they must spend to achieve prevention. Despite the Task Force's calls for substantial increases in public funding, even HUD asked Congress to rescind the monies already appropriated to address lead-based paint.

Because the Task Force recommendations simply knuckle under to what the controlling interests will agree to, the proposals are based on premises that we must reject as inimical to children's health, unfounded in practice, and unlikely to achieve lead poisoning prevention through hazard reduction:

1. The report promotes partial, "interim controls" as the proper method to reduce lead-based paint hazards and a substitute for hazard abatement.
2. The report seeks to trade such partial, interim controls for

protection from liability.

3. By leaving lead-based paint in children's homes, the report places substantial burden for lead poisoning prevention on tenant children and their families, the persons least able to control their situation.

We are troubled by the report's acceptance that it is infeasible to abate lead-based paint from housing. On cost-benefit grounds, complete abatement is demonstrably feasible: several analyses conducted for CDC and EPA have found that even large investments in abatement are justified by the societal returns in preventing lead poisoning. (See: US Department of Health & Human Services, *Strategic Plan for the Elimination of Childhood Lead Poisoning*, 1991; J. Schwartz, *Societal Benefits of Reducing Lead Exposure*, 66 *Environmental Research* 105, 1994). The obstacles to abatement are not economic, but political. We do not question the lack of political support for such an investment; we do challenge the blurring of reasons. It may become important to realize why we did not invest in or abate this controllable danger to children's health.

In an era of defederalization, when lead-based paint programs will be consolidated with other programs and deferred to the states, it is essential this report strongly reaffirm the requirement that all strategies must be based on consistent principles of preventing lead poisoning, with the goal of attaining the eradication of lead toxicity. The previous Administration stated this clear goal, and we should restate it here. We find it conspicuously absent from the report.

Therefore we cannot endorse recommendations which, ostensibly to avoid increasing the costs of compliance, omit controls and testing that would guarantee increased health and safety. The report is so stripped of protection for the victims of lead-based paint that the report's many tradeoffs are morally repugnant. Indeed the report itself admits that its baseline requirements are not enough to protect families at risk; thus, the requirements cannot be enough to limit owners' liability. The Task Force further concludes that one in five residential buildings is economically distressed, and owners of distressed housing will not comply with the Task Force's standards. Such statements of course only encourage noncompliance. Even in housing receiving federal Section 8 funding, the Task Force states that compliance with the standards is "not representing to occupants that any particular unit contains no lead-based paint hazards." How can we endorse recommendations that perpetuate lead hazards and allow substantial numbers of children to continue to be poisoned?

Interim Controls

The recommended “interim controls” are not based on validated experience with their short or long-term efficacy to reduce lead-based paint hazards. Although data do not support the efficacy of the proposed actions, the Task Force is silent on this critical lack of information. Passing mention that the recommendations “may need to be changed” is an inadequate discussion of a fundamental flaw in the standards that are central to the report and hardly an endorsement of the need to revisit the standards when data become available from studies now underway.

The proposals do not even address the minimum lead-based paint hazards defined by Title X. For example, the “standard treatments” ignore high risk accessible surfaces that young children can chew, despite Title X’s clear definition of these surfaces as hazards. Although the report states that “intervening after a child has been harmed is unacceptable,” the procedures dealing with accessible surfaces do just that. Partial, interim controls are viewed as onerous enough even in response to a poisoned child. Young children at immediate risk of poisoning are to receive even less protection. This Task Force has rejected requiring adequate protection of both non-poisoned young children and poisoned children.

Contrary to the Task Force view, interim controls are to be implemented as “interim,” not permanent, and be adequate to “control” hazards. To carry out that purpose, interim controls must include frequent monitoring of the continued lead-based paint conditions and continued lead dust accumulations. As we know from experience with other management approaches that permit environmental hazards to remain in place, this strategy can only work with inspection and monitoring that ensures early detection and correction of any change in condition that increases the risk of lead exposure. Even intact, non-chewable, non-friction, or non-impact surfaces can still contain high levels of lead-based paint. This lead-based paint will, next week, month, or year, and in poor housing likely sooner than later, only deteriorate and have to be patched up again and again. Proper ongoing monitoring must be a responsibility not of the owner or, least of all, the tenant, but of the public housing authority, another local agency, or an independent third party.

The costs of interim controls thus actually include the continued monitoring and evaluation and repeated hazard reduction efforts as surfaces deteriorate or other forces disturb the lead-based paint. If these efforts are included, as they must be, it may well be cost-effective just to do the job right the first time. Truly effective hazard abatement also makes complete abatement, though doable, less necessary.

The report contains no such program. Where property does not turn over, the Task Force’s “standard treatments” require no controls whatsoever for 18 months, even when a young child resides in a dwelling unit. In units with young children, irreparable lifelong injuries can be inflicted within weeks.

The Task Force places little value on creating a stream of safe and affordable housing before a child or pregnant woman moves in or a childbearing aged woman becomes pregnant in a high risk unit. Waiting for the risk to escalate encourages the status quo: lead-based paint risk reduction will only be activated after a child’s or fetus’s exposure.

Clean-up and clearance testing: While recognizing lead dust “may not be visible to the naked eye and is difficult to clean up,” the report gives short shrift to the intensive cleaning needed to remove lead dust and at various points implies mere wiping is enough. The definition of “specialized cleaning” does not mention the widely recognized HEPA vacuuming. Even where clearance testing may be performed after interim controls, it means only lead dust testing, which does not ensure all lead-based paint hazards were corrected. The report contains no discussion of the equally necessary requirement to dispose of contaminated cleaning materials and debris properly.

Essential maintenance practices are another big step down the scale even from interim controls. Yet the Task Force presents EMPs as lead-based paint hazard controls in housing where lead-based paint may in fact pose serious hazards, but a lead-based paint inspection simply has not been done. Much of the “interim controls” package is nothing more than routine essential maintenance: a minimum requirement of owners in any rental housing unit regardless of any lead there. Many of the highest risk dwellings do not meet these code requirements; repeating them in the guise of lead poisoning prevention does not make their implementation more likely.

Costs of abatement usually include exterior as well as interior abatement. These costs are inflated figures used as the excuse to accept interim controls and not to abate. The costs of abating interior lead-based paint, which poses the greatest hazards, are much less. Particularly during renovation, where abatement can occur almost automatically, with little incremental cost, full, permanent abatement should be required. Abatement contributes to the renovation, cures code violations and structural defects, lowers future maintenance and monitoring costs, and averts liability costs. Especially in the most deteriorated, lowest income housing that has the greatest hazards, permanent abatement is clearly the option that may prove most cost-effective, even without weighing the overwhelming health and social benefits in the equation. Yet the Task Force never contemplates abatement.

Treatment at turnover: If abatement is not to occur at renovation, then abatement should be effectuated at least at property turnover. *Somewhere, sometime*, we must focus on *correcting hazards permanently*.

Poisoned children: We should not wait for a poisoned child

to correct hazards. The many different opportunities to intervene include, for example, initial and periodic inspections to approve or renew subsidies or loans, inspections for reasons besides lead hazards, tenants' complaints, health department records of new births, renovation, and turnover. In the case of a poisoned, permanently damaged child, anything less than immediate, permanent control of all hazards is totally unacceptable. What are we waiting for? For the child to be poisoned again and again? Even abatement only of lead-based paint "hazards" is disfavored. Then we are still just waiting for intact surfaces that still contain high levels of lead paint to deteriorate; to add to the child's damage, as well as the building's damage, and the owner's liability; and to be patched up—again and again. Every effort must be made to provide the already compromised child fully abated housing.

Trained and certified risk assessors, inspectors, and workers evaluating or working on lead-based painted surfaces is one requirement Title X unequivocally imposes. Yet, under the Task Force's non-health-based standards, no such person need be trained or certified. No trained or certified worker is required at all on the job site or to perform any work that disturbs lead-based paint.

Unwarranted Limits on Liability

Finally, the report is replete with statements that the current tort system does not work. While the current system is not perfect, it is a powerful incentive for property owners to prevent lead poisoning to reduce their liability. Equally important, it offers the only avenue for lead poisoning victims to seek compensation for their harms. The current system's problem is that many children do not have access to lawyers to seek redress. Our current compensation system could be improved, but the answer is not simply to "scrap" it for new, untested procedures.

The Task Force proposes a complicated two-tiered liability system. If owners follow the minimal "standard treatments" that have not been proved to protect children from lead poisoning, owners will have nevertheless met the standard of care and be shielded from liability if children are poisoned. The report also limits owners' liability if they obtain a "lead hazard certificate" or "lead hazard status." Yet owners will not need these other liability limitations if they meet the minimal "benchmark standards" of care.

As part of the Task Force's explicit recognition that the recommended standards, even if complied with, will not protect children adequately and will still cause poisonings, the report proposes an "offer of remedial compensation." If an owner has complied, and a tenant child is poisoned, the owner *may*, if the owner agrees, provide medical and relocation expenses. The report fails to take a consistent or firm position even on remedial education. Alternatively, the child may pursue compensation

through the judicial system, but since the owner has complied with the standard of care, the child's suit will surely be fruitless. Thus the owner will have no reason to opt into the compensation system.

We cannot recommend a drastic removal of the only recourse the many poisoned children and their families now have, however imperfect, until we have more confidence how such liability tradeoffs are to be implemented and enforced. We find no clear statements on this critical point. We find the discussion of the situation that will arise, when a child is poisoned in "certified" housing, irresponsible at best. The report acknowledges the need for some sort of fund, but proposes no way to establish this fund. The result plays into the hands of general tort reformers and takes away legal rights in advance of establishing an alternate recourse. While the Task Force operated under the principle that liability limits had to be packaged with an "alternative mechanism" for ensuring that poisoned children can obtain some compensation, the Task Force could not actually devise this "alternative." It must be adequately established before we can propose liability reform, caps, or prohibition of punitive damages.

In sum, neither the health nor the legal consequences of the recommendations are understood. Many points are too obscure to take a position. Their plain meaning is simply not understandable, even to the best educated persons who are not experts on each particular issue. For example, while overwhelming evidence establishes that lead-based painted window areas and carpets trapping lead-based paint dust often pose the most serious hazards, the recommendations merely state that "any hazards presented by these components should be properly controlled." In the absence of any specific requirement to do anything, there is no standard.

Examples of Recommendations For the Task Force Report

The following measures address the most urgent sources of lead exposure and establish a unit's lead safety when occupied by tenants (non-owners) with:

- incomes are less than 125% of poverty; and
- a child equal to or less than 6 years old or a pregnant woman.

In these circumstances, all deteriorated surfaces are to be properly treated, and all chewable, friction, and impact surfaces are to be permanently abated.

Priority should be given to very low-income tenants for three basic reasons:

- Very low-income tenants have the least resources and are least able to fend for themselves.
- Unfortunately, the tenants' low income is the best indica-

tor of deteriorated housing conditions, and deteriorated conditions are not likely in newer housing, so targeting these tenants targets the worst lead-based paint hazards.

- Targeting these tenants meets the President's Executive Order # 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, February 11, 1994..

Examples of Minimum

Recommendations: A Summary

Due to space constraints, we can only provide examples of our minimum recommendations in skeletal summary. We proposed these recommendations in more complete and explanatory form to the Task Force throughout its deliberations, and these points are made in conjunction with our previous comments.

- I. In all housing, all prevailing housing code requirements not specific to lead-based paint must be enforced and complied with, for example
 - Undamaged, intact paint, plaster, and underlying surfaces.
 - Absence of leaks.
 - Properly installed and functioning windows, doors, and cabinets.
- II. Congress and local legislatures must appropriate more funds desperately needed for lead-based paint detection and abatement in economically distressed properties, by increasing subsidies to those properties and any other possible financial mechanisms.
- III. Properties most in need of funds for lead-based paint abatement are defined as pre-1980 dwelling units housing tenants (non-owners) with:
 - A. A child age six years or under or pregnant woman; and
 - B. Income less than 125% of the poverty level.
- IV. These funds must be funnelled into code enforcement initiatives. To be eligible for the funds, a locality must have:
 - A. Upgraded its code to include specific requirements for lead-based paint; and
 - B. Established a code enforcement system that includes specific procedures and requirements for lead-based paint and a timely schedule of inspection and monitoring unless lead-based paint has been fully abated.

Procedures and Requirements for

Establishing Lead Safety

- V. A tenant (non-owner) of a pre-1980 dwelling unit with a child age six or under or pregnant woman must be able to request an inspection or a risk screen and obtain the inspection or screen within a specific time limit. If an inspection is requested, a screen is unnecessary. If a screen is requested and shows positive indicators, the tenant or owner may then request an inspection.
 - A. The time limit for an inspection or screen for tenants

less than 125% of poverty must be the shortest and a specified number of days, as these tenants reside in the units to which lead-based paint abatement enforcement funds are to be funnelled. Inspections and screens for tenants in increasingly higher income brackets will be conducted after requests from the lower brackets are met.

- B. The inspection is by:
 1. A *trained local governmental agency* inspector, or
 2. A trained *private inspector licensed* by a local governmental agency.

The screen is by a trained *private screener certified* by a local governmental agency.

- C. The dwelling owner is billed for the inspection or screen.
- D. The inspection or screen results are recorded so the process is not repeated.
- E. The *inspection* is for:
 1. Lead-based paint on all interior painted surfaces; and
 2. The condition of the interior lead-based painted surfaces: deteriorated paint or a deteriorating underlying surface; and
 3. The nature of the interior lead-based painted surfaces: chewable (forming an edge or protruding), subject to friction (rubbing), or subject to impact (banging).

The *screen* is for:

1. The condition of the interior painted surfaces: deteriorated paint or a deteriorating underlying surface (compliance with code requirements other than for lead-based paint); and
2. The nature of the interior painted surfaces: chewable, subject to friction, or subject to impact; and
3. Lead dust on three different friction or impact surfaces per room.

- VI. Part of the inspectors' and screeners' duties is to deliver the inspection or screen results to the owner, the tenant, and a designated governmental agency office within a specific time after the inspection or screen.

- VII. Before and whenever a child age six or under or pregnant woman occupies a pre-1980 dwelling unit, the owner has the immediate duty to determine the presence of and correct the interior lead-based painted surfaces by:

- A. Abatement or making the paint intact where the paint is deteriorated (compliance with other code requirements); and
- B. Correcting deteriorating underlying surfaces and

- abating or making the paint intact (compliance with other code requirements); and
 - C. Abatement of the surfaces that are chewable, subject to friction, or subject to impact.
- VIII. Abatement or making paint intact must:
- A. Be performed by trained and certified workers; and
 - B. Remove paint by non-toxic stripping methods or wet scraping or make paint permanently inaccessible with permanent, durable, and impermeable material; and
 - C. Follow safety standards that cover work area containment, wet scraping and other abatement methods, clean-up by wet mopping and HEPA vacuuming, proper disposal of lead contaminated cleaning materials and debris, and temporary relocation of the occupants to suitable quarters for any period when all bathrooms, the kitchen, or more than half of all other rooms are in the contained area; and
 - D. Pass lead dust clearance testing standards before moving the occupants in or back to their dwelling.
- IX. The owner will be liable for injuries caused by noncompliance with this duty. Compliance will be enforced by such damages and by imposition of penalties, regardless of injury, if the owner has not complied with the duty.
- A. Penalties will increase if, within a specific time after delivery of inspection results, the owner has still not complied.
 - B. The time limit for correction after delivery of inspection results and before penalties increase must be the shortest and a specified number of days for tenants less than 125% of poverty, as these tenants reside in the units to which lead-based paint abatement enforcement funds are to be funnelled. Correction for tenants in increasingly higher income brackets will be conducted after correction for the lower brackets is completed.
- X. Any time afterward the tenant must be able to request a screen for the condition of the remaining interior lead-based painted surfaces—deteriorated paint or a deteriorating underlying surface (compliance with other code requirements)—and obtain the screen within a specific time limit.
- XI. Increased penalties also will be imposed if within a specific time after delivery of screen results, unless an inspection
- has been requested, the owner has not corrected the condition of the interior painted surfaces by:
- A. Abatement or making the paint intact where the paint is deteriorated (compliance with other code requirements); and
 - B. Correcting deteriorating underlying surfaces and abating or making the paint intact (compliance with other code requirements); and
 - C. Abatement or removal of lead dust on all surfaces that are chewable, subject to friction, or subject to impact in any room that had lead dust on any surfaces tested for lead dust.
- Time limits are to be comparable to VII.
- XII. Increased penalties also will be imposed if within a specific time after delivery of screen results, after an inspection and ensuing correction, the owner has not corrected the condition of the interior lead-based painted surfaces by:
- A. Abatement or making the paint intact where the paint is deteriorated; and
 - B. Correcting deteriorating underlying surfaces and abating or making the paint intact (both amounting simply to compliance with other code requirements).
- XIII. Once an inspection or screen is requested, the ensuing requirements do not terminate if a child age six or under or pregnant woman no longer resides in the dwelling unit.
- XIV. In all units referred to at VII where any interior lead-based painted surfaces are not abated, a program of regular, frequent, periodic inspection and actions pursuant to XII A and B must be implemented including, but not limited to, upon turnover, lead poisoning of any resident in the building, and renovation. A licensing fee imposed on owners that elect not to abate fully can finance the increased inspection and monitoring required in any such situations.

Schedule of Events

Lead-Based Paint Hazard Reduction and Financing Task Force

Date	Description	Location
November 8, 1993	Full Task Force	Holiday Inn Capitol 550 C Street, SW Washington, DC 20024
February 9-10, 1994	Full Task Force Finance Committee Implementation Committee Liability and Insurance Committee	Holiday Inn Capitol 550 C Street, SW Washington, DC 20024
April 4-6, 1994	Finance Committee Implementation Committee Liability and Insurance Committee	Capitol Hilton 16th & K Street, NW Washington, DC 20036
June 20-22, 1994	Finance Committee Implementation Committee Liability and Insurance Committee	Waterfront Marriott 80 Compromise Street Annapolis, MD 21401
September 8-9, 1994	Implementation Committee Liability and Insurance Committee	Madison Hotel 15th & M Street, NW Washington, DC 20005
November 14-16, 1994	Public Hearing (First Day)	James R. Thompson Auditorium 100 W. Randolph Chicago, IL 60601
	Full Task Force	Ambassador West 1300 N. State Pkwy Chicago, IL 60610
March 13-15, 1995	Full Task Force	Georgetown University Conference Center 3800 Reservoir Road Washington, DC 20057

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