

***Regulatory Impact Analysis of Lead-Based Paint  
Hazard Disclosure Regulation for Real Estate Transfers***

Regulatory Impacts Branch  
Economics, Exposure, and Technology Division  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, DC 20460

October 1995

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>7</b>
<b>CHAPTER 1: BACKGROUND AND FRAMEWORK FOR ANALYSIS</b> .....	<b>9</b>
<b>Effect Of The Disclosure Rule On Sales</b> .....	<b>9</b>
<i>Requirements of the Rule</i> .....	9
<i>Parties Affected by the Rule</i> .....	10
<i>Cost Effects on Affected Parties</i> .....	10
<b>Effect Of The Disclosure Rule On Rentals</b> .....	<b>14</b>
<i>Requirements of the Rule</i> .....	14
<i>Parties Affected by the Rule</i> .....	15
<i>Cost Effects on Affected Parties</i> .....	15
<b>CHAPTER 2: PROFILE OF SECTORS AFFECTED</b> .....	<b>17</b>
<b>Real Estate Agents/Managers and Operators/Lessors</b> .....	<b>17</b>
<b>Mortgage Lenders (Banking and Financial Services)</b> .....	<b>18</b>
<b>Real Estate Attorneys (Legal Services)</b> .....	<b>19</b>
<b>CHAPTER 3: ESTIMATED COSTS TO PRIVATE PARTIES AND GOVERNMENT</b> .....	<b>21</b>
<b>Costs to Private Parties of Complying with the Disclosure Regulation for Real Estate Transfers</b>	<b>21</b>
<i>Structure of Cost Analysis</i> .....	21
<i>Sources of Data</i> .....	23
<i>Analysis of Costs by Affected Transaction</i> .....	29
<i>Total Annual Costs to Private Parties of Compliance Requirements of Disclosure Rule for Real Estate Transfers</i>	38
<i>Sensitivity Analysis of Costs to Private Parties</i> .....	38
<i>Compliance Monitoring Costs to Private Parties</i> .....	40
<b>Costs to Government for Administering the Disclosure Regulation for Real Estate Transfers</b> ..	<b>41</b>
<i>Inspection and Case Management Costs</i> .....	41
<i>Performance Measurement and Management</i> .....	42
<i>Compliance Assistance</i> .....	42
<i>Total Costs to Government</i> .....	42
<b>Total Costs to Private Parties and Government of the Disclosure Regulation for Real Estate Transfers</b> .....	<b>42</b>
<b>CHAPTER 4: EFFECT OF THE LEAD PAINT HAZARD DISCLOSURE RULE FOR REAL ESTATE TRANSFERS ON SMALL BUSINESSES - REGULATORY FLEXIBILITY ANALYSIS</b> .....	<b>44</b>
<b>Background and Approach</b> .....	<b>44</b>
<b>Role of Small Businesses in Affected Industries</b> .....	<b>44</b>
<b>Assessment of Effects on Small Businesses</b> .....	<b>45</b>
<i>Organization Primarily Engaged in Residential Sales</i> .....	46
<i>Organization Primarily Engaged in Residential Rentals</i> .....	48
<i>Organization Engaged in Residential Sales and Rentals</i> .....	48

<b>CHAPTER 5: ASSESSMENT OF BENEFITS</b> .....	<b>50</b>
<b>Understanding the Market Imperfection</b> .....	<b>50</b>
<b>Exposure to Lead from Lead-Based Paint and Related Adverse Health Effects</b> .....	<b>50</b>
<b>Benefits of the Disclosure Rule</b> .....	<b>51</b>
<b>Methodological Options for Predicting Response to Information Products</b> .....	<b>53</b>
<b>APPENDIX A: SUMMARY OF EXISTING STATE RULES REGARDING LEAD PAINT HAZARDS AND DISCLOSURE</b> .....	<b>56</b>
<b>Massachusetts</b> .....	<b>57</b>
<b>Rhode Island</b> .....	<b>57</b>
<b>Maine</b> .....	<b>58</b>
<b>California</b> .....	<b>58</b>
<b>APPENDIX B: DATA SOURCES</b> .....	<b>60</b>
<b>Text Citations</b> .....	<b>60</b>
<b>Personal Communications</b> .....	<b>62</b>

## EXHIBITS

<b>Exhibit 1: Cost Components and Frequency of Occurrence by Affected Transaction and Party .</b>	<b>12</b>
<b>Exhibit 2: Establishment, Employment and Payroll Data for Affected Business Groups . . . . .</b>	<b>18</b>
<b>Exhibit 3: Summary Indicator Data for Real Estate Industry Performance . . . . .</b>	<b>18</b>
<b>Exhibit 4: Summary Indicator Data for Commercial Banking and Savings Institution Sectors .</b>	<b>19</b>
<b>Exhibit 5: Summary of Data Items and Values for Affected Parties and Events Used in Analysis of Lead-Paint Hazard Disclosure Rule for Real Estate Transfers . . . . .</b>	<b>25</b>
<b>Exhibit 6: Summary of Time Requirements for Time-Related Cost Components in Analysis of Lead-Paint Hazard Disclosure Rule . . . . .</b>	<b>29</b>
<b>Exhibit 7: Number of Years for Annualization of Start-Up Costs . . . . .</b>	<b>29</b>
<b>Exhibit 8: Cost Analysis For Sales Transactions (all dollar values at 1994) . . . . .</b>	<b>31</b>
<b>Exhibit 9: Cost Analysis For Rental Transactions (all dollar values at 1994) . . . . .</b>	<b>36</b>
<b>Exhibit 10: Estimated Annual Costs to Private Parties of Disclosure Rule for Real Estate Transfers . . . . .</b>	<b>38</b>
<b>Exhibit 11: Sensitivity Analysis of the Cost of the Disclosure Rule for Real Estate Transfers . . .</b>	<b>39</b>
<b>Exhibit 12: Estimated Total Annual Costs of the Disclosure Rule for Real Estate Transfers . . . .</b>	<b>43</b>
<b>Exhibit 13: Small Business Participation in Affected Business Sectors, 1992 . . . . .</b>	<b>45</b>
<b>Exhibit 14: Illustration of Effects of Disclosure Rule for Transfers on Small Businesses . . . . .</b>	<b>47</b>

## EXECUTIVE SUMMARY

Pursuant to Section 1018 of the Residential Lead-Based Paint Hazard Reduction Act (“the Act”) of 1992, the Office of Pollution Prevention and Toxics (OPPT) of the U.S. Environmental Protection Agency (EPA), in cooperation with the U.S. Department of Housing and Urban Development (HUD), is promulgating regulations for the disclosure of information concerning lead upon transfer of residential property.

This Regulatory Impact Analysis (RIA) examines the potential costs, benefits, and impacts of regulations for the disclosure of possible lead-based paint hazards in residential property upon the transfer of the property for sale or rental. The analysis is presented in five sections: Background and Framework for Analysis; Profile of Sectors Affected; Estimated Costs to Private Parties and Government; Effect of the Lead-Based Paint Hazard Disclosure Rule for Real Estate Transfers on Small Businesses - Regulatory Flexibility Analysis and; Assessment of Benefits. An Appendix is also included which provides a summary of existing state rules regarding lead-based paint hazards and information disclosure.

### BACKGROUND AND FRAMEWORK FOR ANALYSIS

The rule will apply generally to residential housing built before 1978, unless the housing has no bedrooms, is housing for the elderly or disabled and may not be lived in by a child under the age of six (“target housing”), or is rental housing certified as having no lead-based paint on any surface. These regulations will therefore change current business practices in a great number of sale and rental transactions, imposing compliance costs on certain involved parties.

Specifically, the disclosure rule establishes requirements governing the transfer of information from seller to buyer and lessor to tenant. A seller of target housing is required to: provide a prospective purchaser an EPA-approved lead hazard information pamphlet; notify a prospective purchaser of any known lead-based paint or related hazard associated with the property; extend to a prospective purchaser the opportunity for a 10-calendar day period to conduct a lead-based paint inspection and risk assessment before becoming wholly obligated under contract and; include as a part of a contract for the sale of target housing a disclosure and acknowledgment statement that includes a Lead Warning Statement with wording prescribed by legislation. The disclosure and acknowledgment statement is executed by the seller, buyer, and, if party to the transaction, the seller’s agent, and documents compliance with the requirements of the disclosure rule.

The requirements of the disclosure rule with respect to rentals are similar but exclude the 10-day inspection period.

Record keeping is required for both types of transactions, however, as each buyer/tenant must sign an acknowledgment certifying their receipt of the information (pamphlet and information on known lead-based paint or related hazards) which must be maintained by the seller/lessor, or agent/property manager acting in behalf of the seller/lessor.

Those parties directly affected by the rule are the seller, lessor, agent, property manager, buyer, and tenant. For cost estimation purposes, EPA grouped the required activities that create a regulatory burden on the affected parties into four categories:

Start-up costs, which include learning the rule’s requirements and establishing compliance procedures;

- Disclosure activities, which refer to the costs resulting from the actual transfer of information and obtaining of needed signatures;
- Record keeping, which result from the requirement that signed acknowledgment statements

must be retained by the provider of the information; and

- Materials, which is linked primarily to the disclosure requirement, as the lead hazard information pamphlet must be purchased or photocopied (acknowledgment statements must also be duplicated). Costs may also be incurred for filing where a high number of acknowledgment statements are generated (e.g., agents), though this burden was estimated to be quite modest.

## **PROFILE OF SECTORS AFFECTED**

The requirements of Section 1018 of the Act fall primarily on the seller or lessor of “target housing,” which is defined to be any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than 6 years of age resides or is expected to reside in such housing) or any zero-bedroom dwelling. However, if an agent or property manager acts on behalf of the seller or lessor, which EPA estimated to be the case in the great majority of transfers, the responsibilities fall to such agents or managers.

To analyze the impacts of the rule, EPA sought data on two industry sectors which, together, the Agency believes constitute the regulated community in connection with this rulemaking. EPA also sought data pertaining to the frequency of occurrence of regulated activities (sales and rental transactions in target housing). The affected sectors include: Standard Industrial Classification (SIC) code 651, Real Estate Operators and Lessors, with 92,000 establishments that may be affected by the rule; and SIC code 653, Real Estate Agents and Managers, also with 92,000 establishments that may be affected by the rule.

Employment data for these industries were obtained for occupations most likely to be involved in transactions subject to the rule. On the basis of 1992 data, EPA estimates that 352,000 real estate agents and 243,000 property managers will be affected.

With regard to transaction volume, EPA estimates that 2.9 million sales transactions and 9.3 million rental transactions occur annually in target housing.

## **ESTIMATED COSTS TO PRIVATE PARTIES AND GOVERNMENT**

*Exhibit ES.1, Estimated Total Annual Costs of the Disclosure Rule for Real Estate Transfers*, summarizes the estimated total annual compliance costs to private parties and government associated with the regulation. Private parties incur costs as a result of compliance activities as summarized above. The costs to government include the costs of rule administration.

### **Estimated Costs to Private Parties**

EPA estimated total annual costs to private parties of approximately \$81 million in 1994 dollars (see Exhibit ES.1). These costs were estimated in the four cost categories, as discussed below.

The first category, start-up costs, amounts to about \$27 million for both sales and rental transactions, and represents about one-third of the overall estimated annual costs to private parties. Factors affecting the magnitude of these costs include the number of employees having to familiarize themselves with the regulations, both initially (employees in the existing work force) and over time (new entrants to the affected sectors); the time required to learn the activities which must be undertaken in order to comply; and the hourly compensation of affected employees.

<b>Exhibit ES.1: Estimated Total Annual Costs of the Disclosure Rule for Real Estate Transfers</b>	
<b>Transaction and Cost Category</b>	<b>Estimated Cost (\$1994)</b>
<b>Costs to Private Parties</b>	
<u>Sale Transactions</u>	
Start-Up Costs*	\$25.8 million
Disclosure Event Costs	\$20.2 million
Record-Keeping Costs	\$0.6 million
Materials Costs	\$2.8 million
<i>Total for Sale Transactions:</i>	\$49.4 million
<u>Rental Transactions</u>	
Start-Up Costs*	\$1.1 million
Disclosure Event Costs	\$25.6 million
Record-Keeping Costs	\$1.9 million
Materials Costs	\$3.4 million
<i>Total for Rental Transactions:</i>	\$31.9 million
<b>Total Estimated Annual Costs to Private Parties:</b>	<b>\$81.3 million</b>
<b>Costs to Government</b>	
Low Estimate	\$2.4 million
High Estimate	\$4.3 million
<b>Total Estimated Annual Costs:</b>	
Based on Low Estimate of Government Costs	\$83.7 million
Based on High Estimate of Government Costs	\$85.6 million
* First-year costs annualized at 3 percent.	
Source: U.S. Environmental Protection Agency	

As shown in the exhibit, start-up cost estimates differ markedly with respect to transaction type (sale versus rental). The reason for this difference is because rental property owners, who were assumed to be potentially affected by the rule as both sellers and lessors, would only have to familiarize themselves with the regulations once. Costs for these owners were allocated to the “sales” portion of the analysis.

EPA estimated that disclosure event costs would amount to approximately \$46 million annually for both sales and rental transactions, and would constitute the greatest portion of overall costs. Factors affecting the magnitude of these costs include the frequencies of regulated events; the time involved in performing required activities, such as providing the prospective purchaser/tenant with the required information and obtaining the required signatures; and the hourly compensation of all involved parties. EPA also took into account the fact that several states have similar requirements pertaining to information transfer regarding potential lead hazards in the sale of residential property. Thus, an allowance was made in the burden estimates for transactions occurring in such states to reflect a certain level of current compliance.

Record-keeping and materials costs are estimated to amount to about \$9 million annually and comprise a more modest share of overall annual costs. Factors affecting the magnitude of these cost items include the number of affected parties per transaction; the frequency of transactions, the costs of acquiring/duplicating documents, which include the lead hazard information pamphlet and signed acknowledgment statements; and costs to store documents.

As specified in the regulation, rental units that have been found by a certified inspector to be free of lead-based paint on all surfaces will be exempt from the disclosure requirement. As part of this analysis, EPA considered the effect on costs to private parties of rental units being removed from regulatory coverage as

the result of the “finding and certification” process. Using the reduced number of rental transactions expected to be subject to regulation after finding and certifying additional lead-free units over a ten-year period, the estimated costs to private parties fall slightly from to \$81.3 million to \$81.2 million (\$1994). This analysis of the removal of lead paint-free units from regulatory coverage considered only the effect of finding *existing* lead paint-free units and does not consider the effect of abatement activity in creating additional lead paint-free units.

Beyond the direct costs of the regulation to private parties, EPA identified several additional ways in which transaction participants may incur costs in responding to the regulation. However, for each of these mechanisms, EPA judged that the incurrence of costs was not a requirement of the regulation and therefore did not include the costs associated with these mechanisms in the regulatory cost analysis. These additional cost mechanisms include: possible outlays for attorneys to review transactions and document compliance on behalf of participants; possible additional cost burdens for seller or owner parties with multiple persons; possible outlays resulting from additional transaction requirements imposed by lenders; possible outlays resulting from additional transaction requirements imposed by lenders; and possible outlays for professional liability insurance by real estate agents.

Additional costs resulting from actions taken by consumers in response to information, such as possible lost sales, delays in completion of sales, reductions in sales prices, or possible outlays for lead hazard inspections, were not quantified. Currently, data and methods limitations do not permit measurement of how the rules may affect behavior.

### **Estimated Costs to Government**

To administer the final regulation, resources will be required to conduct a number of activities, including:

- Inspections;
- Violation case management;
- Establishment and maintenance of cooperative agreements, if applicable;
- Compliance assistance;
- Development of performance measurement criteria; and
- Management.

EPA estimated the total annual cost of these activities would range from \$2.4 million to \$4.3 million, depending on the estimated number of compliance inspections performed annually.

### **Total Costs to Private Parties and Government**

The estimated costs to private parties and the federal government were summed to yield a comprehensive estimate of the total annual costs of the lead-based paint hazard disclosure regulation for real estate transfers. As shown in Exhibit ES.1, EPA estimated that the total annual costs would range from approximately \$84 million to \$86 million (\$1994).

### **EFFECT OF THE LEAD PAINT HAZARD DISCLOSURE RULE FOR REAL ESTATE TRANSFERS ON SMALL BUSINESSES - REGULATORY FLEXIBILITY ANALYSIS**

EPA investigated the potential impacts of the rule on small businesses, and prepared a Regulatory Flexibility Analysis (RFA). While a large number of small establishments will be potentially affected by the rule, cost

impacts were not found to be of sufficient magnitude to cause undue harm to such establishments. Consequently, EPA did not further modify the regulation based on small business impacts.

In assessing small business impacts, EPA first developed an establishment profile for each major sector (SIC 651 and SIC 653). This profile indicated that approximately 75 percent of all establishments in SIC 651 (Real Estate Operators and Lessors) and approximately 73 percent of all establishments in SIC 653 (Real Estate Agents and Managers) fell within the 1-4 employee size class. These proportions increased to 90 percent and 87 percent, respectively, when employee size class 1-9 was examined.

To measure the cost impacts of the rule on these small establishments, representative, or model, establishments were designed. These model establishments correspond to typical establishments with respect to number of employees and annual transaction volume, in each affected sector. Since transaction activity was reported to vary widely, a range of transaction volume was estimated for each establishment type.

For each model establishment, annual regulatory costs were then calculated and compared to annual labor and overhead costs. Ratios were computed for both high and low estimates of the range of transaction activity. In the case of a real estate sales organization, regulatory costs were found to represent from 0.20 to 0.42 percent of labor and overhead costs. In the case of a rental establishment, impacts were slightly higher, ranging from 0.21 to 0.47 percent. An establishment engaged in both activities was projected to sustain impacts of 0.28 to 0.63 percent. In all instances, the estimated cost burden was less than one percent of the total estimated costs of business operation before regulation.

#### **ASSESSMENT OF BENEFITS**

The market imperfection that the rule is intended to correct is the lack of information available to prospective home buyers and renters. The failure of the marketplace to provide this information means that prospective buyers and renters might purchase or lease a property, or make pricing or rental payment decisions regarding properties, without understanding possible health risks or risk management costs accompanying the transaction.

It is expected that the information provided as a result of this rulemaking will lead buyers and renters to modify their behavior in a way that will reduce health risks from lead exposure. For example, purchasers could undertake abatement activities subsequent to taking ownership of a dwelling. The rule may also prompt property owners, due to reluctance on the part of prospective buyers/tenants to select housing with lead-based paint hazards, to act to reduce lead-related hazards in their residential dwellings.

EPA notes that the regulation does not require actions to be taken to reduce lead-based paint hazards in residential housing; thus, the extent to which benefits accrue depends upon how transaction participants respond to the additional information. Currently, data are not available to permit estimation of how the rule may affect behavior. It was not possible, therefore, to quantify the expected benefits.

Additionally, actions taken in response to new information will involve costs. To assess the net benefits to society from these actions, such costs would have to be estimated and subtracted from the expected benefits associated with the actions. However, because a number of possible outcomes with respect to risk management are possible (as discussed above), the magnitude and distribution of these cost impacts depend highly on how transaction participants interact in the market. That is, for any particular home offered for sale, the cost to manage any risk posed by lead-based paint hazards will vary due to buyer and market characteristics. Often, this cost may be borne by the seller (through, for instance, price concessions), although market situations may exist (for example, where a home is in particular demand) where costs could be borne by the buyer or shared between buyer and seller.

Intentionally Blank Page

Intentionally Blank Page

## INTRODUCTION

Under Section 1018 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, the Environmental Protection Agency (EPA), Office of Pollution Prevention and Toxics (OPPT) is preparing regulations requiring the disclosure at the time of property transfers of possible lead-paint hazards in residential property. These regulations will require owners of most residential property built before 1978 to notify prospective buyers or renters of the property that the property may contain lead-based paint and may present a health hazard. Property owners or their agents are required to:

- Provide prospective buyers and tenants an EPA-approved *Lead Hazard Information Pamphlet* and all known information on the presence of lead-based paint, lead-based paint related hazards, abatement activity, or prior occurrence of lead poisoning at the property. EPA has prepared an acceptable lead hazard information pamphlet titled “Protect Your Family From Lead in Your Home”; however, other pamphlets may be used provided that they have been approved by EPA.
- Include a *Disclosure and Acknowledgment Statement* in sales contracts and rental contracts. The disclosure and acknowledgment statement shall contain a *Lead Warning Statement* that describes the hazards of exposure to lead-based paint and, for sales, recommends assessment of the possible risks of lead-based paint in the subject property prior to its purchase. The Department of Housing and Urban Development (HUD) and EPA have prepared disclosure and acknowledgment statements that may be used under the Section 1018 regulations; however, sellers, lessors, and agents may use an alternate document if it contains the same warning language and disclosure and certification information. The disclosure and acknowledgment statement must be completed, signed, and dated by the parties participating in the sale or rental.
- Sign and date a certification in the disclosure and acknowledgment statement certifying compliance with the disclosure requirements of the Lead-Based Paint Hazard Reduction Act and identifying information relative to lead-based paint given to prospective buyers and tenants of affected properties;
- Obtain signed and dated acknowledgment from buyers and tenants (on the disclosure and acknowledgment statement) that they have been informed of the possibility of lead-based paint hazard at the property and their associated rights under the Lead-Based Paint Hazard Reduction Act;
- Retain the signed disclosure and acknowledgment statement for completed sales and rental transactions for three years from the date of purchase or commencement of the leasing period; and
- Give prospective buyers a 10-calendar day period to conduct a lead-based paint inspection and hazard evaluation, and the provision of withdrawing without penalty from a purchase contract based on the outcome of the inspection.

These regulations will impose various costs on the parties involved in sale and rental transactions and, as well, the federal government. This document presents an analysis of the estimated costs to private parties from compliance with the lead-based paint hazard disclosure regulation for real estate transfers, including an assessment of the rule’s likely effects on small businesses. The document also presents an estimate of the costs to government from administering the regulation and qualitatively assesses the rule’s likely benefits.

The document includes five chapters and two appendixes. The first chapter outlines a framework for understanding the costs of the regulation while the second briefly reviews key economic data regarding the

business sectors likely to incur costs as a result of the regulation. The third chapter presents the analysis of the estimated costs of the regulation to private parties and the federal government and the fourth chapter analyzes the costs to private parties in relation to example small businesses in the affected business sectors. The final chapter discusses the hazards of exposure to lead from lead-based paint and assesses the mechanisms by which the disclosure rule is likely to yield benefits. The first appendix summarizes existing state programs that include a lead hazard disclosure component while the second lists data sources used in this analysis.

Another part of the Residential Lead-Based Paint Hazard Reduction Act of 1992, Section 1021, establishes disclosure requirements for renovation work performed at residential property that may contain lead-based paint. The analysis of the costs of compliance with the disclosure rule for renovation is presented in a separate document, *Analysis of Lead-Based Paint Hazard Disclosure Rule for Renovations*. Much of the methodology and data sources for that analysis is the same as that for the disclosure rule for transfers. In some cases, the analyses overlap in the assumptions regarding estimation and allocation of costs because some parties are affected by both rules.

## CHAPTER 1 BACKGROUND AND FRAMEWORK FOR ANALYSIS

Section 1018 of the Residential Lead-Based Paint Hazard Reduction Act of 1992 requires promulgation of regulations for disclosure of possible lead-based paint hazards in residential property upon the transfer of the property by sale or rental. These regulations will apply generally to residential housing built before 1978 unless the housing contains no bedrooms, or is housing for the elderly or disabled *and* may not be lived in by a child under the age of six (“target housing”). The regulations will change current business practices in sale and rental transactions and impose costs on involved parties. The costs of the lead hazard disclosure regulations (“disclosure rule”) to private parties will manifest foremost as time requirements: time invested in learning the rule and implementing compliance procedures, time required for disclosure activities, and time for meeting the rule’s record-keeping requirements. In addition, the rule will impose modest materials expenses for documents and storage of transaction records. To provide a basis for analyzing these costs, this chapter reviews the requirements of the law and implementing regulations for the affected transactions, identifies the affected parties in those transactions, and summarizes the ways in which those parties may be expected to incur costs as a result of the disclosure rule.

### EFFECT OF THE DISCLOSURE RULE ON SALES

#### Requirements of the Rule

The disclosure rule establishes specific requirements for transfer of information from the seller to the buyer in the sale of target housing. These requirements apply to the seller of target housing or the agent acting on behalf of the seller, if an agent is a party to the prospective sale. The requirements include:

- The seller, or agent acting on behalf of the seller, shall provide a prospective purchaser of the subject property an EPA-approved *Lead Hazard Information Pamphlet* as specified under Section 406 of the Toxic Substances Control Act. EPA has prepared a lead hazard information pamphlet titled “Protect Your Family From Lead in Your Home” that may be used for this purpose. However, sellers and agents may use other information pamphlets provided that they have been approved by EPA for use in the state in which the property is located.
- The seller or agent shall include a *Disclosure and Acknowledgment Statement* in any contract for the sale of target housing, whether for the entirety or for a partial interest. The disclosure and acknowledgment statement shall contain a *Lead Warning Statement* that summarizes the risks of exposure to lead-based paint and recommends assessment of the possible risks of lead-based paint in the subject property prior to its purchase. The Department of Housing and Urban Development (HUD) and EPA have prepared a disclosure and acknowledgment statement that may be used with sales subject to the Section 1018 regulation. However, sellers and agents may use an alternate document if it contains the same warning language and disclosure and certification information. The disclosure and acknowledgment statement must be completed, signed, and dated by the parties participating in the sale.
- The seller or agent shall notify a prospective purchaser of any known lead-based paint or related hazard in the property, and make available to the purchaser any lead hazard evaluation reports that are available to the seller. These reports would include any evaluation or inspection reports prepared on behalf of previous prospective buyers, and any information on past lead paint abatement activity or lead poisoning at the property. In multi-unit housing, such information would include any available information on the presence of lead-based paint or abatement activity in common areas, and any records indicating whether other units (than the subject unit

or units) “contain or have contained lead-based paint or lead-based paint hazards.”

- The seller shall sign and date a Seller’s Certification in the disclosure and acknowledgment statement that he/she has disclosed the required information, if available, to a prospective purchaser and shall describe the information, if any, disclosed to the prospective purchaser. If an agent is a party to the transaction on behalf of the seller, the agent must also sign an Agent’s Certification on the disclosure and acknowledgment statement.
- The prospective purchaser must sign and date a Purchaser’s Acknowledgment, also part of the disclosure and acknowledgment statement, stating that the purchaser is aware of his/her rights under the disclosure rule including the opportunity for a 10 calendar day inspection period, has read the Lead Warning Statement, and has received the lead hazard information pamphlet and the information identified in the Seller’s Certification as having been disclosed regarding the subject property. The seller, and the seller’s agent, if involved, must retain copies of the disclosure and acknowledgment statement signed as part of a consummated sale for three years from completion of the sale.
- The seller shall extend to a prospective purchaser the opportunity for a 10 calendar day period to conduct an inspection and risk assessment for lead-based paint hazards, and the provision of withdrawing without penalty from a purchase contract based on the outcome of the inspection. The regulations stipulate that the buyer may waive this right; in this case, however, the buyer must indicate *in the sales contract* that the inspection opportunity was waived. The regulation includes language for a contingency clause for the 10 calendar day inspection opportunity that may be included in a sales contract. This particular contingency clause does not have to be used by the seller and purchaser; however, use of the suggested language will satisfy the regulation’s requirement for providing the inspection opportunity.

Responsibility for compliance with these requirements falls first on the seller of the target housing but is shared with an agent if the seller has entered a contract with an agent for the sale of the property. The legislation and regulation prescribe penalties for failure to comply with the disclosure rule requirements.

### **Parties Affected by the Rule**

These requirements explicitly affect the three parties who are most directly involved in a real estate sale transaction: Seller, Agent, and Prospective Purchasers. Each of these parties is required to perform some responsibility or invest time in meeting the disclosure rule’s requirements. In addition, two other parties are likely to be affected by the rule in a less direct way: Mortgage Lenders and Real Estate Attorneys. Because lenders accept mortgages on subject properties as security for the purchase loans, lenders have a significant financial stake in understanding the requirements of the disclosure rule and, perhaps, in ensuring compliance with the disclosure rule to prevent a future liability from damaging their security interests in subject properties. Similarly, attorneys virtually always represent or advise parties in real estate sale transactions, including the seller, buyer, and/or lender. To protect the interests of their clients in sales transactions involving target housing, attorneys will need to understand the rule.

### **Cost Effects on Affected Parties**

Five general ways were identified in which the disclosure rule is expected to impose costs on the affected parties. In general, the costs of the disclosure rule will be the aggregation of individual cost effects over the number of parties and transactions that are affected by the rule, or the *frequency of cost occurrence*. Below, each of the five cost components is discussed in terms of how the cost component will affect the parties to

a sale transaction and the frequency of its occurrence:

1. Start-up costs. These costs include the time required to learn the disclosure rule's requirements and set up compliance procedures. All of the affected parties in sale transactions except prospective buyers — that is, sellers, agents, mortgage lenders, and real estate attorneys — are expected to incur these costs. However, costs incurred by attorneys and lenders are qualitatively different from the start-up costs incurred by other affected parties as attorneys and lenders do not explicitly bear a compliance responsibility under the rule. With respect to real estate agents, real estate lenders, and real estate attorneys, these costs are expected to be incurred once for the current stock of individuals performing these capacities. Thereafter, these costs would be incurred by the new entrants to these professions. With respect to the sellers of target housing, a distinction was drawn between sellers of owner-occupied property and sellers of rental property. Start-up costs to sellers of owner-occupied property are expected to be incurred once for each sale of owner-occupied target housing. Sellers of rental property would also be expected to incur start-up costs in bringing a target rental property to market. However, sellers of rental property may be expected to encounter the disclosure rule and its requirements in more than one venue. In particular, a seller of rental property will have encountered the rule as it applies to rental activities and may also encounter the rule more than once in a sales context if the rental property seller owns more than one rental target housing property. Thus, to prevent possible multiple counting of the start-up costs applicable to a seller of rental target housing, the frequency of start-up cost occurrence is judged to be once for each party owning rental target housing and to be counted only once for both sales transaction and rental transactions. Whether this cost component is recognized as a part of sales or rental transactions is largely immaterial. *Exhibit 1, Cost Components and Frequency of Occurrence by Affected Transaction and Party* summarizes these cost effects as they apply to affected parties.
2. Disclosure event costs. These costs refer to the time to perform the disclosure activity itself and include the time to explain the rule, transfer the pamphlet and any additional information between selling and prospective buyer parties, and gain needed signatures on the disclosure and acknowledgment statement. These events are expected to occur at the time a prospective buyer makes an offer on target housing. Thus, the frequency of disclosure event costs will be once for each offer made on target housing. The parties expected to incur these costs are those parties that participate directly in the sale of target housing, namely: sellers, prospective buyers, and selling agents, if involved. In addition to the disclosure event costs that occur in conjunction with presentations to prospective buyers, real estate agents are also expected to incur a disclosure event cost in explaining the disclosure rule and its requirements to the seller of target housing. This aspect of the disclosure event would be expected to occur only once in each sale of target housing (see Exhibit 1).

<b>Exhibit 1: Cost Components and Frequency of Occurrence by Affected Transaction and Party</b>			
<b>Transaction</b>	<b>Cost Component</b>	<b>Affected Party</b>	<b>Frequency of Cost Occurrence</b>
Sales	Start-Up Costs	Real Estate Agents	Once for current stock of agents; annually for new agents
		Sellers of Owner-Occupied Property	Once for each sale of owner-occupied target housing
		Sellers of Rental Property	Once for each party owning rental target housing (see below under rental transactions)
		Real Estate Lenders	Once for current stock of lenders; annually for new lenders
		Real Estate Attorneys	Once for current stock of real estate attorneys; annually for new attorneys
	Disclosure Event Costs	Property Sellers	Once for each offer in each sale of target housing
		Real Estate Agents	Once to explain the rule and its requirements to the seller in each sale of target housing, if agent is involved. Once for each offer in each sale of target housing, if agent is involved.
		Offerors	Once for each offer in each sale of target housing
	Record-Keeping (retaining signed disclosure and acknowledgment statements)	Property Seller	Once for each sale of target housing
		Real Estate Agents	Once for each sale of target housing, if agent is involved
	Materials - Pamphlets - Disclosure and acknowledgment statement - Lead-based paint hazard inspection clause - Storage	Property Sellers and Agents, if involved	Pamphlets: Once for each offer in each sale of target housing Disclosure and acknowledgment statement: Copied in duplicate or triplicate for each offer in each sale of target housing. Lead-based paint hazard inspection clause: Inspection contingency clause is added to sales contracts and copied in duplicate or triplicate for each offer in a sale of target housing. Storage: Agents assumed to require storage for signed Disclosure and Acknowledgment Statement once for each sale of target housing
	Rentals	Start-Up Costs	Property Managers (real estate agents covered under sales)
Owners/Lessors			Once for each party owning rental target housing (but covered under sales)
Disclosure Event Costs		Real Estate Agents, Property Managers	Once for each rental transaction in target housing involving an agent
		Owners/Lessors	Once for each rental transaction in target housing
		Tenants/Lessees	Once for each rental transaction in target housing
Record-Keeping (retaining signed disclosure and acknowledgment statements)		Owners/Lessors or Property Managers	Once for each rental transaction in target housing
Materials - Pamphlet - Disclosure and acknowledgment statements - Storage		Owner/Lessor and Rental Agent, if involved	Once for each rental transaction in target housing. The signed disclosure and acknowledgment statements are assumed to be copied and distributed to the involved parties: owner, tenant, and rental agent, if involved.

3. Record-keeping costs. The rule imposes specific record-keeping requirements on the involved parties. Both the seller and the selling agent, if involved, are required to retain for at least three years the disclosure and acknowledgment statements signed in conjunction with the sale of target housing. Although the costs are likely to be very minor per transaction, the record-

keeping requirement will cause the seller and the selling agent to spend time in filing the specified documents. These requirements will occur once for each sale of target housing (see Exhibit 1).

4. Materials. For sales transactions, the materials costs of the disclosure rule include:
  - The cost of the lead hazard information pamphlet. One copy of the lead hazard information pamphlet is assumed to be required for each offer on target housing.
  - The cost of the *disclosure and acknowledgment statement* (which includes the Lead Warning Statement). The signed disclosure and acknowledgment statement is assumed to be printed on one side of a single sheet of paper that is copied for distribution to the seller, offeror, and real estate agent, if involved.
  - The cost of including a lead-based paint inspection contingency clause in sales contracts. The contingency clause included in the regulation is assumed to be included as a single page addition to the sales contract and assumed to be copied for distribution to the seller, offeror, and real estate agent, if involved (if the clause is added to sales contracts without requiring an additional page, this assumption will overstate regulatory costs).
  - Any materials requirements for storing the signed documents as specified by the rule's record-keeping requirements. Storage costs for the signed disclosure and acknowledgment statement (i.e., filing space) are assumed to be required of real estate agents. Any storage requirement for other affected parties is assumed to be incidental and thus not to impose a cost in terms of filing space (see Exhibit 1).
  
5. Compliance Monitoring. The disclosure rule may also generate costs in conjunction with compliance monitoring activities undertaken by the responsible agencies. At present, EPA expects to perform compliance monitoring activities in response to complaints regarding failure of responsible parties (i.e., sellers, lessors, and sales or rental agents) to comply with disclosure rule requirements and, therefore, most likely on a relatively infrequent basis. Compliance monitoring will likely involve EPA performing an on-site compliance audit and will require parties such as real estate agents to incur costs for the time required to retrieve and copy compliance documents and for photocopying.

Several additional effects of the disclosure rule were identified but are not considered to generate costs that are directly attributable to the rule for the purpose of this analysis. These additional effects include:

- Possible outlays for attorneys to review transactions and document compliance on behalf of participants. It is possible that attorneys may be engaged to review a transaction document to ensure compliance with the disclosure rule on behalf of the transaction principals. Although such actions would create a cost, they are not required by the rule.
  
- Possible additional cost burdens for seller or owner parties with multiple persons. Particularly in the case of sales of rental housing, the buying and/or selling parties may be multiple person entities (e.g., a real estate investment trust). If all persons in a selling or buying entity are required to participate individually in meeting the rule's requirements (e.g., each member of the buying or selling entity is required to sign the Warning Statement), then the compliance burdens might be magnified for some transactions. For this analysis, it is assumed that one person may be assigned responsibility for representing a multiple person entity in meeting disclosure and signature requirements. A similar issue may arise in regard to the sale of investment units in trusts that own rental target housing. For example, the ownership of some real investment trusts

that may own target housing is traded on public securities exchanges. As a result, the ownership interests in these trusts change hands quickly, on a daily basis, and without the traditional inspections of the properties in which ownership interest is being purchased. Because these trades involve the sale of ownership interests between investors who, in general, would not intend to live in the involved properties, these sales are substantially different from sales to prospective owner-occupants. For this analysis, it was assumed that the disclosure and signature requirements would not apply to the sales of publicly traded shares in these real estate trusts. If such requirements were applied to these transactions, then these transactions would become more costly and a large volume of transactions would be additionally affected.

- Possible outlays resulting from additional transaction requirements imposed by lenders. Mortgage lenders may impose additional costs in a transaction as the result of the disclosure rule. For example, to protect their security interests, lenders may require verification and documentation of compliance, or preparation and signing of indemnification agreements against loss from failure of a buyer or seller to comply properly with the disclosure rule. Such actions might impose a cost on the parties to a sale transaction; however, the rule does not require these additional protections.
- Possible outlays for professional liability insurance by real estate agents. Real estate agents are charged with the responsibility of overseeing compliance when they participate in the sale of target housing and may be held responsible for the failure of a transaction to meet rule requirements. To protect against possible liabilities, agents may purchase additional insurance. Again, such outlays are not required by the rule and therefore not considered a cost for this analysis.

Additional costs resulting from actions taken by consumers in response to information were not quantified (currently, data and methods limitations do not permit measurement of how the rules may affect behavior):

- Possible lost sales, delays in completion of sales, or reductions in sales prices. In many cases, improved information may be advantageous to the buyer but disadvantageous to the seller. For example, the disclosure rule may increase the probability that a buyer will withdraw an offer to purchase target housing or to seek price concessions from the seller based on the outcome of an inspection. However, such effects would result from the improved information in the transaction and are indicative of rectifying the market imperfection that is the focus of the disclosure rule. That is, absent information regarding the possible presence of lead-based paint and related hazards in a sale, a buyer might purchase a property or make pricing decisions regarding the property without understanding possible health risks or cleanup costs that may accompany the purchase. The disclosure rule attempts to remedy this imperfection by increasing the amount of information available to prospective buyers.
- Possible outlays for lead hazard inspections, risk screens and risk assessments. An effect of the rule may be to increase the number of lead hazard inspections, risk screens, and risk assessments that are performed. However, the rule does not require these inspections.

## **EFFECT OF THE DISCLOSURE RULE ON RENTALS**

### **Requirements of the Rule**

The requirements of the disclosure rule with respect to rentals are similar to, but somewhat less in scope than,

those specified for a sale transaction. Comparable requirements to those in a sale include the requirement that the owner/lessor of target housing, or the rental agent representing the owner/lessor:

- Provide a prospective tenant/lessee of the subject property a copy of an EPA-approved lead hazard information pamphlet.
- Notify a prospective tenant/lessee of any known lead-based paint or related hazard in the subject unit, and provide any lead hazard evaluation reports and related information that are available to the owner/lessor. These reports would include any evaluation or inspection reports prepared on behalf of previous prospective buyers, and any information on past lead paint abatement activity or lead poisoning at the property. In multi-unit housing, such information would include any available information on the presence of lead-based paint or abatement activity in common areas, and any records indicating whether other units (than the subject unit or units) “contain or have contained lead-based paint or lead-based paint hazards.”
- Include in any rental agreement, a disclosure and acknowledgment statement, which contains the Lead Warning Statement applicable to rental property. EPA and HUD have also prepared a disclosure and acknowledgment statement that may be used with rental transactions subject to the Section 1018 regulation. However, lessors and rental agents may use an alternate statement if it contains the same warning language and disclosure and certification information.
- Sign and date a Lessor’s Certification in the disclosure and acknowledgment statement that he/she has disclosed the required information, if available, to a prospective tenant/lessee and shall describe the information, if any, disclosed to the prospective tenant/lessee. If an agent is a party to the transaction on behalf of the owner/lessor, the agent must also sign an Agent’s Certification on the disclosure and acknowledgment statement.
- Before entering a binding rental agreement, obtain signed and dated acknowledgment from the tenant/lessee on the disclosure and acknowledgment statement that the tenant/lessee is aware of his/her rights regarding receipt of information on lead-related hazards at the property and has received a copy of an approved lead hazard information pamphlet.
- Retain the signed disclosure and acknowledgment statement for three years from the beginning of the tenancy.

The only significant difference in the requirements for a rental transaction from those of a sale transaction is that the rental transaction requirements include no provision for the 10-day inspection period and associated contract withdrawal option.

Responsibility for compliance with these requirements again falls first on the owner/lessor of the target housing but is shared with an agent if an agent participates in the rental transaction.

### **Parties Affected by the Rule**

The parties likely to be affected by rental transaction requirements of the disclosure rule are: the Property Owners/Lessors, Real Estate Agents or Property Managers who may act as rental agents on behalf of Owners/Lessors, and Prospective Tenants. Each of these parties is required to perform some responsibility or invest time in meeting the disclosure rule’s requirements.

## Cost Effects on Affected Parties

The general ways in which the disclosure rule is expected to affect rental transactions are the same as those outlined above for sales transactions. Each of these five cost components is discussed with respect to the affected parties in rental transactions:

1. Start-up costs. Parties expected to incur start-up costs in relation to rental transactions include: property owners/lessors and property managers or real estate agents retained to rent the target properties. Again the start-up costs include the time required to learn the disclosure rule's requirements and set up compliance procedures. In terms of the frequency of cost events, start-up costs are assumed to be incurred once for the existing stock of managers of rental housing and annually thereafter for new entrants to this business. Rental property owners/lessors and real estate agents are also expected to incur start-up costs but these costs are already encompassed as part of the count of affected events in the sale of target housing (see discussion above at start-up costs for sale transactions and Exhibit 1).
2. Disclosure event costs. Parties incurring disclosure event costs include owners/lessors, tenants/lessees, and rental agents, if involved. The time requirements again include the time to explain the rule, transfer the pamphlet and any additional information between owners/lessors and prospective tenants/lessees, and gain the needed signatures to the disclosure and acknowledgment statements. These events are expected to occur at the time the tenant enters a rental agreement/lease for target housing and therefore would be expected to occur once for each rental transaction in target housing. Rental agents would incur this cost only when the rental transaction is assisted by an agent (see Exhibit 1).
3. Record-keeping costs. Record-keeping requirements are expected to fall on the owners/lessors and/or rental agent. The frequency of the record-keeping requirement is expected to be once for each rental transaction in target housing (see Exhibit 1).
4. Materials. Materials costs again include the costs of a lead hazard information pamphlet, the disclosure and acknowledgment statements (which includes the Lead Warning Statement), and any materials requirements for storing the signed document as specified by the rule's record-keeping requirements. Specific materials requirements per rental transaction in target housing include one pamphlet; a copy of the signed disclosure and acknowledgment statement (assumed to be printed on one side of a single sheet of paper) for distribution to the tenant/lessee, owner/lessor, and rental agent, if involved; and the capability of storing the signed document (see Exhibit 1).
5. Compliance Monitoring. As discussed with regard to sales transactions, the disclosure rule may be expected to generate costs for compliance monitoring activities. These costs would be incurred by the rental property owners, real estate agents, and rental property managers who are responsible for complying with the disclosure rule. Compliance monitoring will likely involve EPA performing an on-site compliance audit and will require these parties to incur costs for the time required to retrieve and copy compliance documents and for photocopying.

## CHAPTER 2 PROFILE OF SECTORS AFFECTED

Two business groups are expected to bear the principal effects of the lead hazard disclosure rule for real estate transfers: (1) Real Estate Agents and Managers; and (2) Real Estate Operators and Lessors. It is these parties whose business practices are directly affected by the rule and thus may be expected to incur the greatest costs. In addition, two other business groups — Mortgage Lenders and Real Estate Attorneys — were identified in the preceding chapter as being less directly affected but also possibly incurring costs as a result of the disclosure rule. This chapter summarizes economic data and provides a brief review of the current outlook for these business groups.

Because the economic performance for the two primarily affected groups — Real Estate Agents and Managers, and Real Estate Owners and Lessors — is so closely linked and economic information on these groups is often combined, the following discussion considers these two groups together. Each of the latter two groups is a member of a much broader business sector in the U.S. economy: Mortgage Lenders are members of the Banking and Financial Services Sector; and Real Estate Attorneys are part of the Legal Services Sector. The data and discussion for these latter groups are based on these broader business sector definitions.

### REAL ESTATE AGENTS/MANAGERS AND OPERATORS/LESSORS

Real estate agents/managers and operators/lessors are part of SIC code 65, Real Estate: Real Estate Operators and Lessors, SIC code 651 and Real Estate Agents and Managers, SIC code 653. *Real estate operators and lessors* includes those businesses that are engaged in the ownership and operation of residential and non-residential rental properties. Real estate agents and managers includes businesses who act on behalf on others in the renting, buying, selling, managing, and appraising of real estate properties. On the basis of Census Bureau data, in 1992, these two SIC codes had a total of 184,000 establishments, employed 1,112,000 persons, and had a total payroll of \$23,278 million (see *Exhibit 2, Establishment, Employment and Payroll Data for Affected Business Groups*, next page). The gross employment as reported in Census data is likely to exceed substantially the number of persons that would actually be affected by the disclosure rule. In particular, the Census Bureau data do not permit identification of those businesses whose primary focus is on non-residential property. In addition, the number of persons in these businesses who will have to learn the disclosure rule and be responsible for compliance will be less than the total employment. A better measure of the number of real estate agents and brokers that may be affected by the rule may be gained from Bureau of Labor Statistics (BLS) data as reported in *Occupational Projections and Training Data*. According to BLS data, in 1992, the total employment in the *Real Estate Agents and Brokers* occupation was 352,000. This value would exclude those persons in the business who are not responsible for selling property but would still include persons involved primarily in non-residential property.

During the late 1980s and early 1990s, the real estate development, management and transfer businesses experienced substantial economic weakness as the result of general weakness in the economy, a spate of overbuilding in commercial real estate generally and residential real estate in some regions, and tightened lending standards for real estate development and purchases. Real property values and transaction volumes generally declined, leading to lower revenues and weaker financial performance in this industry. From about 1991-92 onward, these businesses have recovered as interest rates declined substantially and the economy strengthened in general. Most recently, economic performance in these industries has turned somewhat sluggish as interest rates crept upwards over 1994 and the economy shows signs of weaker growth. Key indicators of real estate industry performance include total housing permits, total sales of existing housing units, and total nonresidential

<b>Exhibit 2: Establishment, Employment and Payroll Data for Affected Business Groups</b>				
<b>Business Sector</b>	<b>SIC Code(s)</b>	<b>Number of Establishments</b>	<b>Number of Employees</b>	<b>Total Annual Payroll (\$000, 1992)</b>
Real Estate Agents/Managers and Operators/Lessors				
Operators and Lessors	651	92,000	475,000	8,324,133
Agents and Managers	653	92,000	637,000	14,973,843
Banking and Financial Services Sector				
Commercial Banks	602	65,000	1,576,000	42,518,231
Savings Institutions	603	21,000	355,000	8,758,760
Credit Unions	606	13,000	123,000	2,516,436
Mortgage Bankers	616	15,000	181,000	7,100,076
Legal Services Sector	81	154,000	952,000	39,857,204
Source: U.S. Department of Commerce, Bureau of the Census, <i>County Business Patterns, 1992, 1995</i>				

permit value.<sup>1</sup> These data show that activity in the industry generally peaked between 1986 and 1988, declined until 1991 or 1992, and began to show recovery in 1993 and 1994 (see *Exhibit 3, Summary Indicator Data for Real Estate Industry Performance*, below). Continued strength in the real estate businesses will largely depend on the strength of growth in the overall economy and the persistence of relatively low interest rates.<sup>2</sup>

<b>Exhibit 3: Summary Indicator Data for Real Estate Industry Performance</b>								
	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
Housing Permits (000)	1,534	1,455	1,338	1,104	945	1,105	1,214	1,363
Sales, Existing Housing (000)	3,807	3,901	3,752	3,594	3,575	3,811	4,203	4,404
Nonresidential Permit Value (\$000,000, current)	51,551	54,773	51,536	45,775	34,107	32,825	36,464	40,136
Source: National Association of Home Builders, 1995.								

### **MORTGAGE LENDERS (BANKING AND FINANCIAL SERVICES)**

Several parts of the banking and financial services sector participate in mortgage lending, including depository institutions such as commercial banks (SIC 602), savings and loan institutions (SIC 603), and credit unions (SIC 606); and non-depository organizations such as mortgage bankers/companies (SIC 616). On the basis of 1992 census data, these four industry groups had a total of 114,000 establishments with 2,235,000 employees, and made total payroll of \$60,894 million. The segment of the industry and its employees that will be affected by the lead hazard disclosure rule is much smaller than the total of the industry sectors. For example, the Bureau of Labor Statistics (BLS) estimates the total number of *Credit Clerk and Authorizer* positions to be about 218,000 as of 1994 (*Occupational Outlook Quarterly*, Spring 1994). Credit clerks and authorizers would include those persons in lending organizations who are

<sup>1</sup> Permit value is the estimated cost of construction and improvements activity specified at the time a construction permit is obtained for performing new construction or improvements to an existing property.

<sup>2</sup> See the summary financial outlook for the homebuilding and real estate investment industries in Value Line Investment Survey, April 21, 1995, page 873 and, May 5, 1995, page 1171.

responsible for managing and approving credit. Because credit management involves other types of loans in addition to real estate loans, the number of positions identified by BLS would be expected to exceed the number of persons involved in mortgage lending.

These industry groups experienced a steady, but modest, upward trend in recent years following a period of economic/financial difficulties in the later years of the 1980s. This growth in financial performance resulted from stronger loan demand in the recovering economy coupled with lower interest rates. In turn, interest spreads on loans (the difference between the interest charged for loans and paid for deposits) have increased, leading to higher bank profitability, and the volume of non-performing or classified loans has declined considerably. The savings and loan industry, particularly affected by the deterioration in the real estate industry several years ago, also appears to be recovering. *Exhibit 4, Summary Indicator Data for Commercial Banking and Savings Institution Sectors*, presents data on performance in the commercial banking and savings segments of the industry. For the commercial banking sector, these data show modest growth over the past few years in terms of assets, total value of real estate loans, and equity capitalization. Because of higher scrutiny of the capitalization standards applied to banks over the past several years, the capitalization ratio (equity-to-total assets) rose from 1987 to 1993. The data for savings institutions tell a different story. From 1988 to 1992, total assets in federally insured institutions declined by a substantial 40 percent but had begun to stabilize and recover by 1992. The equity capitalization ratio recovered to 6.1 percent in 1992 after a record low 1.9 percent in 1989. Department of Commerce analysts view both the commercial banking and savings institutions industries as likely to remain in an upturn over the next few years. However, the robustness of performance in both industries depends in large part on the maintenance of relatively low interest rates and avoidance of recession in the aggregate economy and the real estate industries in particular.

<b>Exhibit 4: Summary Indicator Data for Commercial Banking and Savings Institution Sectors</b>								
	Year							
	1987	1988	1989	1990	1991	1992	1993	1994
<b>Commercial Banks</b>								
Total Assets (\$000,000,000)	3,000	3,131	3,299	3,389	3,431	3,506	3,706	3,763
Total Real Estate Loans (\$000,000,000)	600	675	762	830	851	868	923	NA
Total Equity Capital (\$000,000,000)	181	197	205	219	232	263	297	NA
Equity Capital to Assets (percent)	6.03	6.29	6.21	6.46	6.76	7.50	8.01	NA
<b>Savings Institutions, Federally Insured Institutions only</b>								
Total Assets (\$000,000,000)	1,251	1,351	1,234	1,085	920	832	970	927
Total Real Estate Loans (\$000,000,000)	679	727	709	616	682	619	NA	NA
Total Equity Capital (\$000,000,000)	46	55	24	31	49	51	NA	NA
Equity Capital to Assets (percent)	3.71	4.09	1.91	2.86	5.28	6.09	NA	NA
Source: U.S., Department of Commerce, Bureau of the Census and International Trade Administration.								

## REAL ESTATE ATTORNEYS (LEGAL SERVICES)

The Legal Services Industry (SIC group 81) comprises a large number of specialties of which real estate-related activities is only one. Bureau of Census data for 1992 indicate that in SIC group 81, 154,000 total

establishments employed 952,000 persons with a total payroll of \$39,857 million. The Bureau of Labor Statistics estimates the total number of *Lawyers* at about 626,000 (Occupational Outlook Handbook, May 1994). Within this total, the number of attorneys who indicate that real estate practice is their primary business is much smaller. Specifically, data from the “Martindale, Hubbell Law Directory” (Reed Publishing, 1993) indicate that approximately 35,200 attorneys primarily engage in real estate practice.

The legal services industry has shown strong growth over the past few years. Between 1989 and 1994, the estimated receipts of taxable firms grew from \$80.9 billion to \$97.0 billion (Bureau of the Census). Growth was steady over the entire period with no year showing a decline from the previous year. Department of Commerce analysts cite increasing competition in the legal services industry as possibly reducing the growth in fees and total receipts in future years. However, the overall economic/financial outlook for the industry remains favorable.

## **CHAPTER 3**

### **ESTIMATED COSTS TO PRIVATE PARTIES AND GOVERNMENT**

The costs of the lead-based paint hazard disclosure rule for real estate transfers include costs to the private parties that are affected by the rule, as outlined in Chapter 1, and the costs to the federal government for administering the regulation. This chapter assesses both cost categories and is organized in three major sections. The first, and longest, section of the chapter addresses the costs to private parties while the second section reviews the expected costs to the federal government for administering the regulation. The final section summarizes the aggregate findings for the costs to both private parties and the federal government.

#### **COSTS TO PRIVATE PARTIES OF COMPLYING WITH THE DISCLOSURE REGULATION FOR REAL ESTATE TRANSFERS**

The costs of the lead-based paint hazard disclosure rule to private parties were analyzed in accordance with the framework outlined in Chapter 1. Before presenting the cost estimates, the following sections first review general considerations in analyzing the costs, and the methods and sources for gathering data for the analysis. Following these discussions, the next section presents the estimated compliance costs for sale and rental transactions, including a summary of the calculations leading to the cost values. Following this discussion are a sensitivity analysis in which the values for important, but uncertain, factors in the analysis are varied to understand their effect on the expected cost of the disclosure rule; and an assessment of the likely costs of compliance monitoring activities to private parties.

#### **Structure of Cost Analysis**

The aggregate costs of compliance were estimated for the two transactions affected by the rule — Sales and Rentals — and for four components of cost: Start-Up, Disclosure Event, Record-Keeping, and Materials. Within this framework, costs were estimated in terms of the incremental time and materials required for compliance with the disclosure rule aggregated over the estimated number of transaction events and/or persons affected by the rule. The incremental time requirements were valued on the basis of the loaded labor cost of the affected individuals if the time required for compliance is part of the person's occupation. If the time required for compliance is not part of the person's occupation, the time was valued on the basis of an estimated after-tax income to the person in the assumption that the personal time spent in compliance displaces the opportunity to work and earn additional income. Materials costs were estimated as the out-of-pocket costs for the material required — for example, the cost of the lead hazard information pamphlet or the copies of the signed disclosure and acknowledgment statements.

In summary, the elements in the calculation of the aggregate cost for a time-related cost component include the time spent per person or event, the number of affected people or events, and the value of time. The general formula for the cost of a time-related event is as follows:

$$\text{Cost of Time-Related Event} = \frac{\text{time}}{\text{event}} \times \frac{\text{cost}}{\text{time}} \times \text{number of events}$$

Similarly, the elements of a materials cost are the number of materials required per event, the number of events, and the cost of the material. For example,

$$\text{Cost of Copies} = \frac{\text{copies}}{\text{event}} \times \frac{\text{cost}}{\text{copy}} \times \text{number of events}$$

Costs were aggregated to yield an estimated *annual* cost of compliance. In this aggregation, the cost of time-related events was treated differently depending on whether the cost is a recurring event based on the volume of affected transactions or is a one-time start-up cost for affected parties. For cases where costs are incurred in the course of a transaction — for example, the disclosure event associated with a sale or rental transaction — the estimated cost per transaction event is simply multiplied times the number of events per year to yield the estimated annual cost. Alternatively, in those cases in which parties incur a one-time start-up cost as part of their business (e.g. agents, property managers), the cost is annualized over the expected tenure of those persons in their occupation.<sup>3</sup> It was assumed that the start-up time spent in learning the requirements of the disclosure rule and developing compliance procedures is a displacement from time that would otherwise be spent in generating additional income for the affected person or business entity. To illustrate, it is assumed that a real estate agent would otherwise spend time attempting to complete property sales or rental activities instead of spending the time to learn the disclosure rule. On the basis of this assumption, the discount rate used for annualizing the cost of start-up activities is a displacement-of-consumption rate of *three* percent. In addition, the analysis also presents cost values calculated on the basis of a higher displacement-of-investment rate of *seven* percent. Because non-recurring outlays are a relatively small component of the total costs imposed by the disclosure rule, the increase in cost from using the higher seven percent rate is small and amounts to only a few percent of the total estimated costs for the rule.

An additional element of the analysis of start-up costs involves the recognition that the start-up costs to members of the affected occupations occur at one-level in the first year of compliance with the rule and at another level thereafter. Specifically, the *existing* stock of persons in the various occupations affected by the rule — for example, real estate agents and rental property managers — is assumed to learn the rule and establish compliance procedures in the first year of the rule and these costs occur *one time only* and are annualized in the manner described above. However, additional start-up costs would be incurred by the new entrants to these business groups: new real estate agents, and property managers (and lenders and attorneys, when their costs are considered) will have to learn the disclosure rule. Although the new entrants to these businesses will typically be a small percentage of the existing stock, some costs will still be incurred in each year for this start-up activity. This element of start-up cost was analyzed in the following manner:

---

<sup>3</sup> Start-up costs for mortgage lenders and real estate lawyers would be treated in the same way. Although lenders and lawyers may incur costs in learning about the disclosure rule as described in Chapter 1, they are not explicitly charged with compliance-related responsibilities under the rule. Because their incurrence of costs is not strictly required by the disclosure rule, start-up costs for lenders and lawyers are not considered in the base cost analysis presented in this chapter. However, costs for lenders and lawyers are considered as part of the sensitivity analysis presented later in the chapter. Costs for lenders and lawyers are assumed to occur only as start-up costs and the analytic treatment of these costs is the same as that discussed for the other occupations expected to incur start-up costs.

1. An estimated number of entrants to the affected occupational categories was obtained from the Bureau of Labor Statistics (BLS). The measure provided by BLS takes into account both the growth in total positions in an occupation and the movement of persons out of the occupation creating a need for new entrants. The value obtained from BLS is the average annual number of new entrants in each affected occupation over the period 1992-2005.
2. The annual start-up cost for new entrants to the affected professions was calculated as follows:

$$\textit{Annual Start-Up Costs for Entrants} = \textit{entrants} \times \frac{\textit{hours}}{\textit{start-up}} \times \frac{\textit{cost}}{\textit{hour}}$$

These costs were assumed to occur in the first year of the regulation and each year thereafter.

Another element of the analysis concerns the estimation of incremental costs of compliance in states that have some form of a lead paint hazard disclosure requirement pertaining to real estate transactions. As described in Appendix A, several states were identified as having a disclosure rule for real estate sales that encompasses some of the features of the federal rule. In these states, real estate agents may have to spend less *incremental* time per transaction to meet the federal rule requirements because some of the explanation and disclosure activity would occur independent of the requirements of the federal disclosure rule. However, only for three of these states — Massachusetts, Rhode Island, and Maine — was the state rule deemed likely to offset the incremental time that would otherwise be required for compliance with the federal rule (See Appendix A). This determination was based on the degree to which these states' rules focus on lead-based paint as an environmental hazard and the nature of a requirement for explanation and/or obtaining of signatures of acknowledgment as part of the disclosure activity. For sales transactions in these states, the incremental time for disclosure activities was reduced to reflect the likely reduction in the time required for compliance with the federal rule.

### Sources of Data

The data used in this study were obtained from literature searches and personal communication with representatives of the affected parties. Important sources of data for the analysis include federal publications by the Bureau of Labor Statistics, Bureau of the Census, and International Trade Administration. In addition, data were obtained from publications of various industry associations and trade groups. Much of the data concerning the estimated time requirements for compliance and frequency of events was obtained through personal communication with independent sales and rental agents, property managers, mortgage lenders, and real estate lawyers. A complete list of the literature sources and the sources of personal communication is presented in Appendix B.

Almost all of the data acquired from independent businesses — real estate agents, rental property managers, renovation contractors, lenders, and attorneys — came from persons and companies based in Massachusetts. Since 1988, Massachusetts has had a lead-based paint disclosure rule for residential real estate sales that is similar to the federal rule. Because real estate agents and other affected parties in Massachusetts have worked with this rule for several years, their insights into how the new federal rule would likely affect transactions and impose costs were believed to provide a sound basis for estimating the costs of the federal rule.

Many data items were required for the cost analysis and much of the data is used in more than one calculation. The data that was used to calculate the costs for the three affected transactions, along with the

sources for each value is summarized in three exhibits on the following pages. *Exhibit 5, Summary of Data Items and Values for Affected Parties and Events Used in Analysis of Lead-Paint Hazard Disclosure Rule*, summarizes data in four categories:

1. *Data Items Concerning the Number of Affected Parties or Persons.* These data pertain to the number of parties and persons that will incur start-up costs under the rule. The starting source for most of these values was the Bureau of Labor Statistics publication, *Occupational Projections and Training Data*, and associated BLS publications. An effort was made to use an occupational definition that coincides as closely as possible with the occupation that is expected to incur costs as the result of the rule. However, because data are not available on the number of persons within an occupation who are specifically involved with *residential* real estate sales, management, lending or legal practice, these numbers necessarily have a degree of uncertainty and, in general, may overstate the number of persons who will be affected by the rule.
2. *Data Items Concerning the Number of Transactions and Events that Impose a Cost.* These data are the estimates of the number of times a particular compliance-related activity must occur in each year or in each affected transaction. The number of housing sales is based on 1992 data compiled by the National Association of Realtors and applies to all sales of existing residential property, including both single-family and multi-unit properties. Two adjustments were made to the sales data to yield an estimate of the number of sales transactions that would be affected by the disclosure rule. First, from year-of-construction data from the 1991 American Housing Survey, EPA used the estimated fraction of existing owner-occupied residential units built before 1979 to calculate the number of sales of pre-1979 housing units. This procedure assumes that the fraction of *sales* of pre-1979 housing units will be the same as the fraction of existing *units* that were built before 1979. A second adjustment was made to remove the estimated number of sales of zero-bedroom units with no children occupants. This estimated value is again taken from American Housing Survey data for 1991. EPA used the resulting value, 2,949,000, as the estimated annual number of sales of target housing for this analysis. On the basis of information from the National Association of Realtors, EPA assumed that 85 percent of these sales would involve an agent, who would thus become responsible for ensuring compliance with the disclosure rule. As discussed above, a review of state rules regarding hazard disclosure in real estate transactions indicated that three states have requirements that may offset some of the federal rule requirements. About 60,000 sales of target housing are estimated to occur annually in these states.

Other values summarized in the sales part of the exhibit include the number of offers per sale and the number of lead paint hazard inspections. No solid data were able to be found on the number of offers per sale of residential property. Discussions with real estate agents indicated that the number of offers would typically fall between 1 and 5 and that 2 or 3 might be a reasonable value for this analysis. The primary analysis uses the value of 2 offers per sale. Because this value is a significant element in calculating the number of disclosure events, the higher value of 3 offers per sale was used in the sensitivity analysis presented at the end of this chapter.

With regard to rental-related values, the American Housing Survey for 1990 was again the source of the number of rental units built before 1979 and the adjustment for zero-bedroom units without children. The American Housing Survey also contains data on tenure in various types of property. From these data, it was estimated that approximately 36 percent of rental units were *moved into* in any given year (i.e., not simply re-leased to the same renting party) and the number of rental transactions in target housing was calculated by multiplying the 36 percent by the estimated number of rental target housing units. On this basis, approximately 9,279,000

rental transactions in target housing would be subject to the regulation. This estimate of annual rental events would include rentals that involve written agreements and less formal rentals that do not involve a lease or other

<b>Exhibit 5: Summary of Data Items and Values for Affected Parties and Events Used in Analysis of Lead-Paint Hazard Disclosure Rule for Real Estate Transfers</b>		
<b>Data Item</b>	<b>Value for Cost Analysis</b>	<b>Basis for Value/Source</b>
<b><i>Data Items Concerning Number of Affected Parties or Persons</i></b>		
Number of Real Estate Agents	Current: 352,000	Estimated number of Real Estate Agents, 1992 from <i>Occupational Projections and Training Data</i> (OPTD), Bureau of Labor Statistics, May 1994
Number of Real Estate Agents Involved in Residential Real Estate Transactions	Current: 324,000 Entrants: 8,000	Based on information from Commercial Investment Real Estate Institute, Chicago, that about 8 percent of agents deal exclusively with non-residential transactions. Annual new entrants from OPTD, 1994.
Number of Entities Owning Rental Target Housing	Current: 92,000 Entrants: 4,000	Number of establishments in SIC code 651, Real Estate Operators and Lessors, 1992, <i>County Business Patterns</i> (CBP), Bureau of the Census, 1994. Entrants based on OPTD, 1994.
Number of Real Estate Lenders	Current: 218,000 Entrants: 7,000	Estimated number of Credit Clerks and Authorizers, 1992, and entrants from OPTD, 1994.
Number of Real Estate Attorneys	Current: 35,000 Entrants: 1,000	Estimated number of attorneys primarily practicing real estate law, from "Martindale, Hubbell Law Directory," Reed Publishing, 1993. Entrants from OPTD, 1994.
Number of Property Managers	Current: 243,000 Entrants: 10,000	Estimated number of Property and Real Estate Managers, 1992, from OPTD, 1994
<b><i>Data Items Concerning Number of Transactions and Events that Impose a Cost</i></b>		
<b><i>Sales-Related Values</i></b>		
Annual Number of Sales, Existing Housing	3,811,000 3 states with lead hazard disclosure requirement: 77,400	Estimated total sales of existing homes, apartments, condominiums, and co-ops, 1992, National Association of Realtors, 1993.
Percentage of Existing Housing Units Built Before 1979	77.7%	Estimated fraction of total housing units built before 1979, based on 1991 American Housing Survey data, provided by HUD.
Sales of Pre-1979 Zero-Bedroom Units With No Children Occupants	12,000	Estimated from 1991 American Housing Survey data, provided by HUD.
Annual Number of Sales, Target Housing	2,949,000 3 states with lead hazard disclosure requirement: 60,000	Estimate based on total housing sales, pre-1979 housing percentage, and number of sales of zero-bedroom units outside scope of rule.
Annual Number of Sales, Target Housing Involving an Agent	2,507,000	Estimate based on 85 percent participation of agents in sales of existing housing, National Association of Realtors, 1993.
Annual Number of Sales, Target Housing Without Assistance of an Agent	442,000	Estimate based on 85 percent participation of agents in sales of existing housing, National Association of Realtors, 1993.
Number of Offers per Sale of Housing	Estimated typical value is 2 to 3 offers per sale	Estimates from real estate agents
<b><i>Rental-Related Values</i></b>		
Number of Rental Housing Units Built Before 1979	26,837,000	From 1991 American Housing Survey data, provided by HUD.
Number of Pre-1979 Zero-	1,061,000	Estimated from 1991 American Housing Survey

<b>Exhibit 5: Summary of Data Items and Values for Affected Parties and Events Used in Analysis of Lead-Paint Hazard Disclosure Rule for Real Estate Transfers (continued)</b>		
<b>Data Item</b>	<b>Value for Cost Analysis</b>	<b>Basis for Value/Source</b>
<b><i>Data Items Concerning Number of Transactions and Events that Impose a Cost (continued)</i></b>		
Number of <i>Target</i> Rental Housing Units	25,776,000	Estimate based on total rental units, pre-1979 percentage, and number of zero-bedroom rental units outside scope of rule.
Annual Number of Rental Transactions in Target Housing	9,279,000	About 36 percent of rental units are occupied by tenants that moved into them within the preceding 12-month period. Estimated from 1991 American Housing Survey, provided by HUD.
Estimated Annual Reduction in Number of Rental Transactions Subject to Regulation	4,200 units annually	Estimate based on annual number of lead-based paint inspections in rental properties and rate at which units are found and certified as lead-free.
<b><i>Data Items Concerning Cost of Time for Compliance-Related Activities</i></b>		
Real Estate Agents	\$12.02, plus fringe and overhead at 64 percent, yields unit hourly cost of \$19.71	Average hourly earnings, December 1994, Finance, Insurance and Real Estate category, from <i>Employment and Earnings</i> (EE), Bureau of Labor Statistics, January 1995. Fringe and overhead rate taken from CAIR burden analysis (EPA).
Real Estate Lessors and Property Managers	\$12.02, plus fringe and overhead at 64 percent, yields unit hourly cost of \$19.71	Same as preceding.
Real Estate Lenders	\$9.40, plus fringe and overhead at 64 percent, yields unit hourly cost of \$15.42	Median weekly earnings for 1994, Financial Records Processing, from EE, January 1995. Weekly value divided by assumed 40-hour workweek.
Real Estate Attorneys	\$27.90, plus fringe and overhead at 64 percent, yields unit hourly cost of \$45.76	Median weekly earnings for 1994, Lawyers, from EE, January 1995. Weekly value divided by assumed 40-hour workweek.
Personal Time (time spent by property owners or buyers apart from their normal compensated occupation)	\$11.28, less 27.65 percent for income tax and FICA withholding, yields unit hourly value of \$8.16	Average hourly earnings for December 1994, total private employment, less allowance for income tax and FICA withholding, EE, January 1995.
<b><i>Data Items Concerning Cost of Materials for Compliance-Related Activities</i></b>		
Lead Hazard Pamphlet	\$0.24 per pamphlet.	16 pages, printed front and back, folded sheet format (i.e., four 8.5 x 11 sheets per document) (discount office supply bulk copying price, May 1995).
Cost of Disclosure And Acknowledgment Statements and Inspection Contingency Clauses	\$0.04 each for Disclosure And Acknowledgment Statements and Inspection Contingency Clause.	Disclosure and Acknowledgment Statements are required as part of the transactions. Contingency Clauses are assumed to add one page to sales contract. Copying costs are calculated at \$0.04 per page (discount office supply price, May 1995).
Filing Materials	\$0.004 per sheet of paper.	A 4-drawer, 26-inch deep filing cabinet is estimated to hold about 25,000 sheets of paper and to cost \$100 (discount office supply price, May 1995), yielding a filing cost per sheet of \$0.004.

written agreement.

In addition, as specified in the regulation, rental units that have been found by a certified inspector to be free of lead-based paint on all surfaces will be exempt from the disclosure requirement. Using data developed for the analysis of regulations to be issued under Section 402 of the Toxic Substances Control Act, EPA estimated that about 56,000 lead-paint inspections would be undertaken annually in rental property that would otherwise be subject to the disclosure rule. Approximately 21 percent of these units are expected to be certified lead-free and thus will reduce the stock of units that are subject to the disclosure rule.<sup>4</sup> Thus, in each year following the disclosure rule's effectiveness date, the stock of units subject to the disclosure requirement will be reduced by about 11,700 units merely as a result of *finding* units that are free of lead-based paint and certifying them as such. In turn, using the estimate that 36 percent of rental units will be newly rented each year, EPA estimates that the number of rental transactions otherwise subject to the disclosure rule will decline by about 4,200 units annually as the result of the finding and certification process. To illustrate the potential consequence of this reduction in the number of rental units subject to regulation, EPA also analyzed the cost of the disclosure rule after the assumed passage of ten years and with the consequent accumulated reduction of about 42,000 transactions in the number of rental transactions annually subject to the regulation.

A number of other mechanisms would also lead to fewer rental transactions being subject to the disclosure rule over time, including: creation of additional lead-free units through abatement activity and loss of units with lead-based paint through demolition or other destruction. However, these mechanisms will likely have much less effect than the "finding and certification" mechanism and have not been reflected in the analysis.

3. *Data Items Concerning the Cost of Time for Compliance-Related Activities.* As noted above, the cost of time for compliance-related activities was calculated on the basis of the loaded labor cost of the affected individuals if the time required for compliance is part of the person's occupation. Hourly income data for the affected occupations for 1994 were obtained from the Employment and Earnings report published by the Bureau of Labor Statistics (BLS). The estimated time values for persons affected by the rule as part of their occupation include an allowance for fringe and overhead costs. The total fringe and overhead markup used in these analyses is 64 percent: 40 percent for fringe benefits and 17 percent for overhead ( $1.40 \times 1.17 = 1.64$ ).<sup>5</sup> Time that is not part of the person's occupation was valued on the basis of the hourly income for all private employment as reported by BLS: \$11.28 at December 1994. This value was reduced by 27.65 percent to account for income tax and FICA payments.
4. *Data Items Concerning the Cost of Materials for Compliance-Related Activities.* Materials costs were estimated as the out-of-pocket costs for purchasing the materials required for compliance and include four items: (1) the cost of the Lead Hazard Information Pamphlets; (2) the cost of the Disclosure and Acknowledgment Statements; (3) the cost of including the inspection contingency

---

<sup>4</sup> Estimate of percentage of rental units constructed 1979 or earlier and not containing lead-based paint taken from *Comprehensive and Workable Plan for the Abatement of Lead-Based Paint in Privately Owned Housing: Report to Congress*, U.S. Department of Housing and Urban Development, 1990. See Table 3-2 on page 3-7.

<sup>5</sup> The fringe and overhead cost multiples are based on previous analyses of information burden analyses undertaken by the Regulatory Impacts Branch, Office of Pollution Prevention and Toxics.

clause for lead-based paint hazards in sales contracts; and (4) the cost of document storage. EPA did not include in this analysis any cost for *developing* Lead Hazard Information Pamphlets, Disclosure and Acknowledgment Statements, or inspection contingency clauses because EPA and/or HUD have prepared acceptable materials for each of these items. Although the regulation does not require that transaction participants use the EPA/HUD materials, these materials are available to transaction participants. Accordingly, transaction participants will not need to incur costs to develop these materials.

- Lead Hazard Information Pamphlet: EPA has prepared a Lead Hazard Information Pamphlet, *Protect Your Family From Lead in Your Home*, that may be used to meet the information pamphlet requirement. The U.S. Government Printing Office (GPO) estimates that this 16-page document, printed front and back in three colors, in a half-standard page size format, will be available to the public at a price of \$0.52 per copy. As noted in Chapter 1, the regulation permits use of other lead hazard information materials if EPA has approved their use. In addition, transaction participants may copy or print the EPA-approved document as needed. Thus, transaction participants may be able to obtain or reproduce the document at lower cost than from GPO. For this analysis, EPA assumed a document cost of \$0.24 per copy.
- Disclosure and Acknowledgment Statement: EPA and HUD have prepared two disclosure and acknowledgment statements that may be used to meet the disclosure and acknowledgment documentation requirement. Both statements are printed on one side of a single sheet of paper. For this analysis, EPA assumed that transaction participants would incur a document copying cost of \$0.04 per statement.
- Inspection Contingency Clause for Lead-Based Paint Hazard: The regulation includes approved language for an inspection contingency clause to be added to sales contracts for target housing. If used, this clause would require approximately one-half of a page in standard text format. For this analysis, EPA assumed that including an inspection contingency clause in a sales contract would require one additional page to be copied at the copying cost of \$0.04 per page. If a contingency clause is able to be included in a sales contract without adding to its page length, the assumption of one additional page will overstate the cost for this item.
- Document Storage: In all instances, the costs of document storage are assumed to be part of an existing filing system. As a result, the only materials costs for filing compliance-related documents are the cost of the filing cabinet. A 4-drawer, 26-inch deep filing cabinet costing about \$100 (discount office supply price, May 1995), is estimated to hold approximately 25,000 sheets. Thus, the incremental filing cost per copy was estimated at \$0.004 (see Exhibit 5).

*Exhibit 6, Summary of Time Requirements for Time-Related Cost Components in Analysis of Lead-Paint Hazard Disclosure Rule* (next page), summarizes the estimated amounts of time incurred by affected parties in complying with rule requirements. These estimates are based on conversations with persons in the occupations that will be affected by the disclosure rule. Because these estimates are uncertain and play an important role in determining the overall expected cost of the rule, the estimates were varied for the sensitivity analysis presented at the end of this chapter.

The third of the data compendium exhibits, *Exhibit 7, Number of Years for Annualization of Start-Up Costs* (next page), lists the lengths of time used for annualizing start-up costs by the various affected occupations. These values are based on occupational tenure data obtained from the Bureau of Labor Statistics.

## Analysis of Costs by Affected Transaction

The following sections summarize the analysis of costs for the affected transfer transactions: sales and rentals. Each discussion is accompanied by an exhibit outlining the components of the cost calculation.

### Analysis of Sales Transactions

As outlined in Chapter 1, the parties affected by the disclosure rule in sales transactions are sellers, real estate agents, prospective purchasers, and, less directly, lenders and attorneys. *Exhibit 8, Cost Analysis for Sales Transactions*, summarizes the calculations leading to a total cost of the rule associated with sales transactions. These costs are discussed for each of the four cost components below.

<b>Exhibit 6: Summary of Time Requirements for Time-Related Cost Components in Analysis of Lead-Paint Hazard Disclosure Rule</b>				
<b>Transaction</b> Affected Party	<b>Cost Component</b>			<b>Basis for Estimates</b>
	<b>Start-Up</b>	<b>Disclosure Event</b>	<b>Record-Keeping</b>	
<u>Sales</u>				
Real Estate Agents	1 hour	5 minutes <sup>†</sup>	0.5 minutes	Discussions with real estate agents and associations
Sellers	1 hour	5 minutes <sup>†</sup>	0.5 minutes	
Offerors	None	5 minutes <sup>†</sup>	None	
Mortgage Lenders (considered as part of the sensitivity analysis)	1 hour	None	None	Discussions with bank associations and lenders
Real Estate Attorney (considered as part of the sensitivity analysis)	1 hour	None	None	Discussions with attorneys and conveyancing association
<u>Rentals</u>				
Property Managers	1 hour	5 minutes	0.5 minutes	Discussions with real estate agents, rental property owners/managers and associations
Owners/Lessors	1 hour	5 minutes	0.5 minutes	
Real Estate Agents	None (covered under Sales)	5 minutes		
Tenants/Lessees	None	5 minutes		
<sup>†</sup> These values were halved for the estimated number of sales of target housing in the three states with lead-based hazard disclosure rules that are similar in scope to the Federal disclosure rule. Source: U.S. Environmental Protection Agency				

<b>Exhibit 7: Number of Years for Annualization of Start-Up Costs</b>	
<b>Occupation of Affected Party</b>	<b>Years</b>
Real Estate Agents	6
Property Managers	6
Lenders (considered as part of sensitivity analysis)	6
Attorneys (considered as part of sensitivity analysis)	11
Source: U.S. Dept. of Labor, Bureau of Labor Statistics	

### Start-Up Costs

Start-up costs include the time required to learn the rule and the time to set up compliance procedures. For

the base analysis, parties expected to incur start-up costs in sales transactions include sellers and real estate agents; costs to real estate lenders and real estate attorneys are considered in the sensitivity analysis. The time required to learn the rule was estimated on the basis of existing training programs in Massachusetts as well as through personal communication with representatives of the various affected parties. For example, a 3-hour seminar entitled “Recent Developments in Lead Paint Law and Practice” was recently sponsored by the Massachusetts Conveyancers Association. Isolating the disclosure portion of the course suggests that 1 hour is a reasonable amount of time for attorneys to learn the rule. Phone conversations with individual real estate agents indicated that between one-half hour to two hours was a reasonable time for agents to learn the rule. The time required for a real estate agent to learn the rule was therefore estimated to be about 1 hour as well. Similarly, the time for lenders and sellers was also estimated to be about 1 hour. Prospective buyers do not incur a start-up cost (See Exhibit 6).

The estimated start-up times were multiplied by the estimated hourly values of time (see Exhibit 5) to determine the start-up costs per person in each party. The resulting per person costs were then multiplied by the total number of individuals affected (see Exhibit 5), to yield the total start-up costs for each party.

For the existing stock of real estate agents (and lenders and attorneys in the sensitivity analysis), the value of the start-up time is assumed to be retained for as long as they remain in their field. These start-up costs were therefore annualized according to the expected tenure in each field as discussed above, and at interest rates of three and seven percent. Also, as described above, the start-up costs incurred by new entrants to these occupations were also included as an annual cost in this analysis. Although sellers of owner-occupied housing are assumed to incur a start-up cost in learning the rule’s requirements and assembling any information to be transferred to prospective buyers, these costs are assumed to provide only a one-time value per transaction and are thus not annualized.

On the basis of these values, the estimated annual start-up costs for sales transactions sum to \$25.8 million at the three percent discount rate and \$26.0 million at the seven percent rate (see Exhibit 8; all regulatory cost amounts are expressed in 1994 dollars). It should be noted that these costs include an allowance for sellers of rental property that is based on the total estimated number of parties owning rental property. This value exceeds the number that would be directly attributable to sales transactions under the disclosure rule. However, these start-up costs would be incurred by these parties either in the course of property sales or in rental property management activities (i.e., under the rental transaction disclosure requirement of the rule). These costs are recognized in the sales transaction but, to prevent double counting, are excluded from the rental transaction analysis.

#### *Disclosure Event Costs*

The cost of disclosure refers to the cost of time spent by each party in complying with the rule in an affected transaction. For sales transactions, disclosure event costs are characterized as follows:

- Disclosure activities performed by the real estate agent, if involved, and the seller in providing required notifications and information to offerors. These activities occur once for each offer presented in a sale and include the time to provide the offeror with: a copy of an approved lead hazard information pamphlet; any known information that may indicate the presence of lead-based paint or a lead-based paint hazard on the property; and all known lead hazard evaluations, information, and records. The disclosure time also includes providing the offeror with a disclosure and acknowledgment statement, which includes the Lead Warning Statement, and obtaining needed signatures on the disclosure and acknowledgment statement from the seller and the offeror. Parties incurring these costs include sellers, real estate agents, and offerors. Real estate agents are assumed to incur these costs in only those transactions in which the target housing is being offered through an agent, or in about 85 percent of sales based on information from the from the National

Association of Realtors (see Exhibit 5). Because sellers must sign the Seller's Certification as part of each sale contract, sellers were assumed to incur these costs in each offer on target housing.

<b>Exhibit 8: Cost Analysis For Sales Transactions (all dollar values at 1994)</b>								
<b>Cost Component: Start-Up Costs</b>							<b>Annual</b>	<b>Annual</b>
<b>Party Incurring Cost</b>	<b>Persons Affected</b>	<b>Hours/ Person</b>	<b>Cost/ Hour</b>	<b>Cost/ Person</b>	<b>Total Cost</b>	<b>Cost at 7 Percent</b>	<b>Cost at 3 Percent</b>	
<b>Sellers, Owner-Occupied Housing</b>	2,949,000	1.000	\$8.16	\$8.16	\$24,067,025	\$24,067,025	\$24,067,025	
<i>Seller costs occur annually and are not annualized.</i>								
<b>Costs for Existing Stock of Persons in Affected Occupations</b>								
<i>These costs occur one time only at the first year of the rule and are annualized over a 6-year period.</i>								
<b>Real Estate Agents</b>	324,000	1.000	\$19.71	\$19.71	\$6,386,947	\$1,339,955	\$1,179,014	
<b>Sellers, Rental Property</b>	92,000	1.000	\$19.71	\$19.71	\$1,813,578	\$380,481	\$334,782	
<b>Costs for New Entrants to Affected Occupations</b>								
<i>These costs occur annually and are not annualized.</i>								
<b>Real Estate Agents</b>	8,000	1.000	\$19.71	\$19.71	\$157,702	\$157,702	\$157,702	
<b>Sellers, Rental Property</b>	4,000	1.000	\$19.71	\$19.71	\$78,851	\$78,851	\$78,851	
<b>Total, Start-Up Costs:</b>						<b>\$26,024,014</b>	<b>\$25,817,375</b>	
<b>Cost Component: Disclosure Event Costs</b>								
<b>Party Incurring Cost</b>	<b>Total Sales</b>	<b>Hours/ Event</b>	<b>Cost/ Hour</b>	<b>Cost/ Event</b>	<b>Events/ Sale</b>	<b>Annual Cost</b>		
<b>Costs for States Without Lead-Based Paint Hazard Disclosure Rule</b>								
<b>Real Estate Agents, dealing with:</b>								
- Sellers	2,456,000	0.083	\$19.71	\$1.64	1	\$4,034,553		
- Offerors	2,456,000	0.083	\$19.71	\$1.64	2	\$8,069,106		
<b>Sellers</b>	2,889,000	0.083	\$8.16	\$0.68	2	\$3,929,560		
<b>Offerors and Buyers</b>	2,889,000	0.083	\$8.16	\$0.68	2	\$3,929,560		
<b>Costs for States With Lead-Based Paint Hazard Disclosure Rule</b>								
<b>Real Estate Agents, dealing with:</b>								
- Sellers	51,000	0.042	\$19.71	\$0.82	1	\$41,890		
- Offerors	51,000	0.042	\$19.71	\$0.82	2	\$83,779		
<b>Sellers</b>	60,000	0.042	\$8.16	\$0.34	2	\$40,805		
<b>Offerors and Buyers</b>	60,000	0.042	\$8.16	\$0.34	2	\$40,805		
<b>Total, Disclosure Event Costs:</b>						<b>\$20,170,059</b>		
<b>Cost Component: Record-Keeping Costs</b>								
<b>Party Incurring Cost</b>	<b>Total Sales</b>	<b>Hours/ Event</b>	<b>Cost/ Hour</b>	<b>Total Hours</b>	<b>Events/ Sale</b>	<b>Annual Cost</b>		
<b>Real Estate Agents</b>	2,507,000	0.0083	\$19.71	20,892	1	\$411,833		
<b>Property Sellers</b>	2,949,000	0.0083	\$8.16	24,575	1	\$200,559		
<b>Total, Record-Keeping Costs:</b>						<b>\$612,392</b>		
<b>Cost Component: Materials Costs</b>								
<b>Party Incurring Cost and Material</b>	<b>Total Sales</b>	<b>Material Units/ Sale</b>	<b>Total Unit Items</b>	<b>Cost/ Material Unit</b>	<b>Materials Cost by Category</b>	<b>Annual Cost</b>		
<b>Real Estate Agents</b>								
- Disclosure/Acknowledgment Pgs	2,507,000	6	15,042,000	\$0.040	\$601,680			
- Contingency Clause Pages	2,507,000	6	15,042,000	\$0.040	\$601,680			
- Lead Hazard Pamphlets	2,507,000	2	5,014,000	\$0.240	\$1,203,360			
- Filing Material Costs	2,507,000	1	2,507,000	\$0.004	\$10,028			
<b>Total Materials Cost to Real Estate Agents</b>					<b>\$2,416,748</b>	<b>\$2,416,748</b>		
<b>Sellers without an Agent</b>								
- Disclosure/Acknowledgment Pgs	442,000	4	1,768,000	\$0.040	\$70,720			
- Contingency Clause Pages	442,000	4	1,768,000	\$0.040	\$70,720			
- Lead Hazard Pamphlets	442,000	2	884,000	\$0.240	\$212,160			
- Filing Material Costs			Not Applicable		NA			
<b>Total Materials Cost to Sellers</b>					<b>\$353,600</b>	<b>\$353,600</b>		
<b>Total, Materials Costs:</b>						<b>\$2,770,348</b>		
<b>Total Annual Costs for Sales at 3 Percent Discount Rate:</b>						<b>\$49,370,175</b>		

Source: U.S. Environmental Protection Agency

- Disclosure activities performed by the real estate agent, if involved, in informing the seller of compliance responsibilities in the sale. If a real estate agent is involved in the sale of target housing, it is assumed that the agent will spend time in explaining the requirements of the disclosure rule to the seller. This event would be expected to occur once in each sale of target housing and, for the disclosure event analysis, is applied to the agent only. The *seller*, but not the agent, is assumed to spend additional time understanding the rule requirements as provided for in the analysis of *start-up* costs.

On the basis of conversations with Massachusetts real estate agents, a typical time for the disclosure activity is estimated at between one and twenty minutes but would more typically fall in the low end of the range, or about 5 minutes. For this analysis, it was assumed that the time for disclosure during the sale of target housing is 5 minutes (or 0.083 hours) per disclosure event. For transactions in states that have a disclosure rule similar in scope the federal rule, this time was halved to 2.5 minutes. For sales involving an agent, this time is assumed to be spent by the real estate agent *once in each sale* in dealing with the seller, and *once for each offer in the sale* in dealing with the offeror (see Exhibit 6). Sellers and offerors are assumed to spend this time once for each offer in each sale of target housing. As previously discussed, the number of offers assumed for the analysis is two per sale of target housing.

The number of annual disclosure events for the agent, seller and offeror is based on the number of sales in total and with an agent (see Exhibit 5), and the number of events per sale. The number of annual disclosure events for each party is then multiplied by the value of time for each party (see Exhibit 5) and the estimated amount of time for disclosure to yield the estimated total cost for disclosure for sales transactions. The estimated annual cost for sales-related disclosure events is \$20.2 million (\$1994).

#### *Record-Keeping Costs*

The record-keeping provisions of this rule require that both the seller and the selling agent maintain records of the signed disclosure and acknowledgment statements for three years following the completion of the transaction. The record-keeping requirement causes the seller and the selling agent to spend time in filing the specified documents. In all likelihood, some type of filing system already exists for each party. What is significant then is the amount of time that is directly attributed to the disclosure rule. From conversations with Massachusetts real estate agents, the time required for filing the disclosure statements *with the other sales-related paper work* is estimated at a few minutes. However, the incremental filing time that may be reasonably attributed to the disclosure rule itself should be very small or approximately 0.5 minutes (or 0.0083 hours) per sales event.

The total annual cost of record-keeping is calculated by multiplying the time spent per event by the total number of sales events and the value of time for each party, and is estimated at \$0.6 million (see Exhibit 8).

#### *Materials Costs*

For sales transactions, the materials costs of the disclosure rule include the costs of a lead hazard information pamphlet, copying costs for disclosure and acknowledgment statements, copying costs for lead-based paint inspection contingency clauses, and any materials requirements for storing the signed disclosure and acknowledgment statements as specified by the rule's record-keeping requirements. With regard to frequency of cost events, one copy of a lead hazard information pamphlet is assumed to be required for each offer on target property. The number of disclosure and acknowledgment statements per offer depends on whether or

not a real estate agent is involved in the transaction. For the 85 percent of transactions involving real estate agents, three one-page disclosure and acknowledgment statements are assumed to be required for each offer: one each for the seller, offeror, and the real estate agent for a total of three copies. If no real estate agent is involved, only two copies of the disclosure and acknowledgment statement are assumed to be required for each offer: one each for the seller and the offeror for a total of two copies. The same considerations apply for lead-based paint inspection contingency clauses. For sales involving an agent, three contingency clause pages are assumed to be required for each offer. For sales without an agent, two contingency clause pages are assumed to be required for each offer. The storage costs (i.e., filing space) are a function of the number of sales events, and whether the involved party is assumed to view filing as an incidental event that will, even in aggregate, not likely impose a cost.

To calculate the total number of lead hazard information pamphlets required, the number of offers per sale (two) is multiplied by the total number of sales of target property. As noted in Exhibit 5, the pamphlet is expected to cost no more than \$0.24 per copy. Multiplying the \$0.24 per copy times the total number of copies yields the estimated annual cost of lead hazard information pamphlets for sales transactions (See Exhibit 5 and Exhibit 8).

The disclosure and acknowledgment statements *and* lead-based paint inspection contingency clauses are each assumed to cost \$0.04 per copy. As described, the number of copies of each document *per offer* is three for sales involving an agent, and two for transactions in which the owner acts as the selling agent. With an estimated average of two offers per sale of target housing, 6 copies of the disclosure and acknowledgment statement and 6 copies of the lead-based paint inspection contingency clauses are estimated to be required for each sale of target housing involving an agent. For sales without an agent, 4 copies of the disclosure and acknowledgment statement and 4 copies of the lead-based paint inspection contingency clauses are estimated to be required for each sale of target housing. Thus, the total number of copies is calculated as the number of copies per event times the total number of target housing sales — with and without an agent — and multiplied by the number of offers per sale (see Exhibit 8).

Filing-related materials costs include the cost of storing the signed disclosure and acknowledgment statements that result from a completed transaction. Accordingly, only the document signed by the actual buyer (as opposed to unsuccessful offerors) is assumed to be stored and thus require storage capability. Because of the low frequency of transactions for individual buyers and sellers of owner-occupied property, filing-related materials requirements for these parties are assumed to be an incidental expense that does not accumulate as a cost of the rule even when aggregated over the number of affected transactions (i.e., the analysis effectively assumes that one more piece of paper, the disclosure and acknowledgment statement, can always be put in the filing drawer of the seller who will keep a copy of the document).<sup>6</sup> The materials costs of filing are therefore only associated with real estate agents. Assuming that agents already maintain a filing system, the only materials costs would be for the additional filing cabinets needed to retain signed disclosure and acknowledgment statements, which is estimated at \$0.004 per page (see Exhibit 5).

The total cost of materials resulting from sales of target housing is calculated by summing the products of: (1) the total number of pamphlets times the cost per pamphlet; (2) the total number of disclosure and acknowledgment statements *and* lead-based paint inspection contingency clauses times the cost per copy; and (3) the total number of target housing sales events involving agents times the filing cost per sales event. On this basis, the total annual materials costs for sales transactions is estimated at about \$2.8 million.

---

<sup>6</sup> The sellers of rental property may incur a storage cost because rental property ownership may be their business and the accumulation of signed acknowledgment documents may be more than an incidental event. However, this analysis does not currently recognize this possible cost.

### *Total Annual Cost for Sales Transactions*

Combining the estimated cost values for the four components yields a total estimated annual cost of the disclosure rule for sales transactions of \$49.4 million at the three percent discount rate for annualizing start-up costs and \$49.6 million at the seven percent discount rate for annualizing start-up costs (costs in 1994 dollars).

### *Non-quantified Costs*

Additional costs resulting from actions taken by consumers in response to information were not quantified (currently, data and methods limitations do not permit measurement of how the rules may affect behavior).

- Possible lost sales, delays in completion of sales, or reductions in sales prices. In many cases, improved information may be advantageous to the buyer but disadvantageous to the seller. For example, the disclosure rule may increase the probability that a buyer will withdraw an offer to purchase target housing or to seek price concessions from the seller based on the outcome of an inspection. However, such effects would result from the improved information in the transaction and are indicative of rectifying the market imperfection that is the focus of the disclosure rule. That is, absent information regarding the possible presence of lead-based paint and related hazards in a sale, a buyer might purchase a property or make pricing decisions regarding the property without understanding possible health risks or cleanup costs that may accompany the purchase. The disclosure rule attempts to remedy this imperfection by increasing the amount of information available to prospective buyers.
- Possible outlays for lead hazard inspections, risk screens and risk assessments. An effect of the rule may be to increase the number of lead hazard inspections, risk screens, and risk assessments that are performed. However, the rule does not require these inspections.

### **Analysis of Rental Transactions**

Because the disclosure requirements for rentals are essentially the same as for sales, the cost calculations are similar. One difference in the calculations concerns the parties affected. The affected parties involved in rentals are the owners of rental property, real estate agents and rental property managers who rent the properties, and the prospective tenants. No information is currently available on the fraction of rental transactions that involves an agent other than the owner. For this analysis, it was assumed that the same breakdown as for sales — 85 percent of transactions involve an agent — would apply to rentals.

*Exhibit 9, Cost Analysis for Rental Transactions*, summarizes the calculations leading to the estimated cost to private parties of the disclosure requirement for rental transactions. These costs are discussed for each of the four cost components below.

### *Start-Up Costs*

The analysis of start-up costs for the rental related component of the disclosure regulation uses the same framework as described under start-up costs for sales: learning the rule and setting up compliance procedures. EPA assumed that real estate agents and owners of rental property only need to learn the rule once for both sales and rental transactions. The start-up costs for these parties were included in the start-up costs for sales,

and are not repeated under rentals. Thus, the only parties facing a start-up cost are rental property managers.

The time required for property managers to learn the rule, and the value of a property manager's time are assumed to be the same as that identified for real estate agents under start-up costs for sales or one hour.<sup>7</sup> The start-up times are multiplied by the estimated value of time and the total number of property managers for target rental housing (see Exhibit 5) to calculate the total start-up cost incurred by the existing stock property managers. This cost is then annualized according to their expected tenure (see Exhibit 7) and using the 3 and 7 percent discount rates. Costs were calculated for new entrants based on the expected number of new persons in the occupation as outlined at page 22. The total annual start-up costs incurred for rentals is estimated at \$1.1 million at the 3 percent discount rate and \$1.2 million at the 7 percent rate (see Exhibit 9).

#### *Disclosure Event Costs*

The only substantial difference between disclosure in a rental transaction and in a sales transaction is that no 10-day inspection period is specified. This difference is not expected to affect the disclosure time. Accordingly, it is assumed that the time for disclosure in a rental transaction is the same as that for sales transactions. The disclosure event itself is assumed to occur once for each rental transaction and affects the lessor/owner, the rental agent, if involved, and the tenant. As discussed in Chapter 1, it is assumed that the disclosure activity and accompanying signing of a disclosure and acknowledgment statement will occur at the time the tenant and property owner enter a lease agreement and thus would occur once for each rental transaction. However, because of the possibility that this activity might occur more than once for some rental transactions, in the sensitivity analysis, an alternative case was considered in which the disclosure event would occur twice in each rental transaction.

---

<sup>7</sup> A separate estimate for value of time was not found.

<b>Exhibit 9: Cost Analysis For Rental Transactions (all dollar values at 1994)</b>							
<b>Cost Component: Start-Up Costs</b>						<b>Annual</b>	<b>Annual</b>
<b>Party Incurring Cost</b>	<b>Persons Affected</b>	<b>Hours/ Person</b>	<b>Cost/ Hour</b>	<b>Cost/ Person</b>	<b>Total Cost</b>	<b>Cost at 7 Percent</b>	<b>Cost at 3 Percent</b>
<b>Costs for Existing Stock of Persons in Affected Occupations</b>							
<i>These costs occur one time only at the first year of the rule and are annualized over a 6-year period.</i>							
Real Estate Agents					<i>Covered Under Cost Analysis for Sales Transactions</i>		
Rental Property Owners					<i>Covered Under Cost Analysis for Sales Transactions</i>		
Property Managers/Agents	243,000	1.000	\$19.71	\$19.71	\$4,790,210	\$1,004,966	\$884,261
<b>Costs for New Entrants to Affected Occupations</b>							
<i>These costs occur annually and are not annualized..</i>							
Real Estate Agents					<i>Covered Under Cost Analysis for Sales Transactions</i>		
Rental Property Owners					<i>Covered Under Cost Analysis for Sales Transactions</i>		
Property Managers/Agents	10,000	1.000	\$19.71	\$19.71	\$197,128	\$197,128	\$197,128
<b>Total, Start-Up Costs:</b>						<b>\$1,202,094</b>	<b>\$1,081,389</b>
<b>Cost Component: Disclosure Event Costs</b>							
<b>Party Incurring Cost</b>	<b>Total Rentals</b>	<b>Hours/ Event</b>	<b>Cost/ Hour</b>	<b>Cost/ Event</b>	<b>Events/ Rental</b>	<b>Annual Cost</b>	
Property Managers/Agents	7,887,000	0.083	\$19.71	\$1.64	1	\$12,956,238	
Owners/Lessors	9,279,000	0.083	\$8.16	\$0.68	1	\$6,310,555	
Tenants/Lesseees	9,279,000	0.083	\$8.16	\$0.68	1	\$6,310,555	
<b>Total, Disclosure Event Costs:</b>						<b>\$25,577,348</b>	
<b>Cost Component: Record-Keeping Costs</b>							
<b>Party Incurring Cost</b>	<b>Total Rentals</b>	<b>Hours/ Event</b>	<b>Cost/ Hour</b>	<b>Total Hours</b>	<b>Events/ Rental</b>	<b>Annual Cost</b>	
Property Managers/Agents	7,887,000	0.0083	\$19.71	65,725	1	\$1,295,624	
Owners/Lessors	9,279,000	0.0083	\$8.16	77,325	1	\$631,056	
<b>Total, Record-Keeping:</b>						<b>\$1,926,679</b>	
<b>Cost Component: Materials Costs</b>							
<b>Party Incurring Cost and Material</b>	<b>Total Rentals</b>	<b>Material Units/ Rental</b>	<b>Total Unit Items</b>	<b>Cost/ Material Unit</b>	<b>Materials Cost by Category</b>	<b>Annual Cost</b>	
<b>Owners/Lessors without a Rental Agent</b>							
- Disclosure & Acknowledgment Pages	1,392,000	2	2,784,000	\$0.040	\$111,360		
- Lead Hazard Pamphlets	1,392,000	1	1,392,000	\$0.240	\$334,080		
- Filing Material Costs	1,392,000	1	1,392,000	\$0.004	\$5,568		
<b>Total Materials Cost to Owners/Lessors without a Rental Agent</b>					<b>\$451,008</b>	<b>\$451,008</b>	
<b>Owners/Lessors with a Rental Agent</b>							
- Disclosure & Acknowledgment Pages	7,887,000		<i>Not Applicable</i>		NA		
- Lead Hazard Pamphlets	7,887,000		<i>Not Applicable</i>		NA		
- Filing Material Costs	7,887,000	1	7,887,000	\$0.004	\$31,548		
<b>Total Materials Cost to Owners/Lessors without a Rental Agent</b>					<b>\$31,548</b>	<b>\$31,548</b>	
<b>Rental Agents</b>							
- Disclosure & Acknowledgment Pages	7,887,000	3	23,661,000	\$0.040	\$946,440		
- Lead Hazard Pamphlets	7,887,000	1	7,887,000	\$0.240	\$1,892,880		
- Filing Material Costs	7,887,000	1	7,887,000	\$0.004	\$31,548		
<b>Total Materials Cost to Rental Agents</b>					<b>\$2,870,868</b>	<b>\$2,870,868</b>	
<b>Total, Materials Costs:</b>						<b>\$3,353,424</b>	
<b>Total Annual Costs for Rentals at 3 Percent Discount Rate:</b>						<b>\$31,938,840</b>	
<b>Total Annual Costs for Rentals at 7 Percent Discount Rate:</b>						<b>\$32,059,545</b>	
Source: U.S. Environmental Protection Agency							

As mentioned above, 85 percent of the total target rental transactions are assumed to be handled by a property manager, and 15 percent by the owner. Assuming that the disclosure occurs once for each rental transaction, the cost of disclosure is calculated by multiplying the number of disclosures by the hours spent and the estimated value of time for transaction participants. Exhibit 9 summarizes this calculation which sums to \$25.6 million for the involved parties.

#### *Record-Keeping Costs*

It is assumed that the record-keeping requirement for rental transactions falls on both the owners/lessors and rental agents (i.e., real estate agent, property manager or other rental agent), if involved. As for sales, it is assumed that a filing system is already in place, and that the only cost incurred results from the incremental time spent in filing an extra piece of paper, the disclosure and acknowledgment statement, with the lease or other rental documents. Rental property owners are also required to retain for the period of their ownership any available information regarding the presence of lead-based paint or lead-based paint hazard. However, no cost allowance was given for this requirement because of a lack of any reasonable basis for estimating the frequency with which such information would be available to an owner of rental target housing.

The time required for filing is assumed to be 0.5 minutes (the same as that assumed for sales). Multiplying this value by the total number of target rental transactions yields the total time spent filing the disclosure materials. Multiplying the total filing time by the value of time yields an estimated total annual cost of record-keeping for rental transactions of \$1.9 million.

#### *Materials Costs*

Materials costs for the rentals disclosure rule fall in the same categories as listed for sales with the exception that no costs are estimated for copying lead-based paint inspection contingency clauses as the 10-day inspection provision is not included in the rentals rule. Thus, the relevant materials cost categories include the cost of lead hazard information pamphlets, disclosure and acknowledgment statements, and any materials requirements for storing the signed documents as specified by the rule's record-keeping requirements.

The total number of pamphlets distributed is assumed to equal the total number of rental transactions. The total cost for pamphlets is determined by multiplying the total target rental transactions by the cost of the pamphlet.

For the signed disclosure and acknowledgment statements, EPA estimated that a one-page copy would be required for each participant in the rental transaction: owner, tenant, and rental agent, if involved. Total copying cost is calculated by multiplying the number of copies per transaction — three for transactions involving an agent (i.e., one page copied for each of the three parties); two, otherwise — times the number of transactions.

Lastly, in the assumption that the owners/lessors and rental agents, if involved, will retain the signed disclosure and acknowledgment statements in an existing, business-related filing system, the storage cost associated with filing the signed statements is equal to the number of rental transactions in which each party participates multiplied by the cost of filing, \$0.004 per statement. The total cost of materials resulting from rental transaction is equal to the sum of these three costs or \$3.4 million (see Exhibit 9).

#### *Total Annual Cost for Rental Transactions*

Combining the estimated cost values for the four components yields a total estimated annual cost of the disclosure rule for rental transactions of \$31.9 million and \$32.1 million (\$1994) at the 3 and 7 percent discount rates, respectively. Using the reduced number of rental transactions expected to be subject to regulation after finding and certifying additional lead-free units over a ten-year period, these costs fall

slightly to \$31.8 million and \$31.9 million (\$1994) at the 3 and 7 percent discount rates, respectively.

### **Total Annual Costs to Private Parties of Compliance Requirements of Disclosure Rule for Real Estate Transfers**

The estimated annual costs for sales and rental transactions are summed to yield the total estimated annual cost to private parties of the disclosure rule for real estate transfers. The total annual cost is estimated at \$81.3 million at the three percent discount rate or \$81.6 million at the seven percent rate (see *Exhibit 10, Estimated Annual Costs to Private Parties of Disclosure Rule for Real Estate Transfers*).

While the total cost may appear large at about \$82 million annually, the cost per affected transaction is small in relation to the value of the transactions. In all, approximately 12.2 million transactions are expected to be affected, which yields an average annual cost per transaction of about \$6.70.

<b>Exhibit 10: Estimated Annual Costs to Private Parties of Disclosure Rule for Real Estate Transfers</b>		
<b>Affected Transaction Categories and Cost Components</b>	<b>Cost Amount (1994 dollars)</b>	
	<b>at 3 percent rate</b>	<b>at 7 percent rate</b>
<u>Sale Transactions</u>		
Start-Up Costs	\$25.8 million	\$26.0 million
Disclosure Event Costs	\$20.2 million	\$20.2 million
Record-Keeping Costs	\$0.6 million	\$0.6 million
Materials Costs	\$2.8 million	\$2.8 million
<i>Total for Sale Transactions:</i>	\$49.4 million	\$49.6 million
<u>Rental Transactions</u>		
Start-Up Costs	\$1.1 million	\$1.2 million
Disclosure Event Costs	\$25.6 million	\$25.6 million
Record-Keeping Costs	\$1.9 million	\$1.9 million
Materials Costs	\$3.4 million	\$3.4 million
<i>Total for Rental Transactions:</i>	\$31.9 million	\$32.1 million
<i>Total for Rental Transactions:</i> <i>(after 10 years reduction in number of rental units subject to regulation)</i>	\$31.8 million	\$31.9 million
<b>Total Estimated Annual Costs:</b>	\$81.3 million	\$81.6 million
<b>Total Estimated Annual Costs:</b> <i>(after 10 years reduction in number of rental units subject to regulation)</i>	\$81.2 million	\$81.5 million
Source: U.S. Environmental Protection Agency		

### **Sensitivity Analysis of Costs to Private Parties**

Several variables were identified for use in a sensitivity analysis because of the level of uncertainty surrounding the values used in the analysis and the likely magnitude of change in the overall cost of the rule resulting from changes in the value of the variables. For the analysis of sales transactions, the variables identified were the Times for Compliance (e.g., Start-Up Time, Disclosure Time, Record-Keeping Time) and the Number of Offers per sale transaction. For rental transactions, the variables identified were the Times for Compliance and the Number of Disclosure Events required per rental transaction. In addition, there is some likelihood that lenders and attorneys would incur start-up costs in learning the disclosure rule. However, because these costs are not required by the rule, they were not considered as part of the base analysis of costs to real estate transfers but are considered in the sensitivity analysis.

The primary values for compliance times (see Exhibit 5) are based on ranges reported in conversations with real estate agents and other affected parties, and are intended to represent a reasonable average time required to complete the various compliance activities. However, it is recognized that these values are “soft” estimates. To provide a more conservative cost analysis, EPA doubled these times per event for the sensitivity analysis. That is, start-up times were increased from one hour to two hours; disclosure event times were increased from 5 minutes to 10 minutes; and record-keeping times were increased from 0.5 minute to 1 minute.

The primary value for the Number of Offers (see Exhibit 5) is based on a reported range of 1 to 5 offers per sales event, with a more typical range being 2 to 3 offers per sale. Three offers per sale was used as an alternative value for the sensitivity analysis. Similarly, for the sensitivity analysis, it was assumed that, on average, two disclosure events would be required for each rental transaction.

For mortgage lenders and real estate attorneys, start-up costs were on the basis of a one-hour time to learn the disclosure rule’s requirements and using the cost of time values as summarized in Exhibit 1. These costs were annualized over the expected tenure in profession as discussed earlier in the chapter. If incurred, these costs are assumed to be part of the costs of real estate sales.

*Exhibit 11, Sensitivity Analysis of the Cost of the Disclosure Rule for Real Estate Transfers*, summarizes the effects on the sale and rental compliance costs of using the alternative values in the sensitivity analysis. The reported costs are based on use of the three percent discount rate for annualizing start-up costs. The cost effects are reported both as an absolute increase and the percentage increase in total cost.

<b>Exhibit 11: Sensitivity Analysis of the Cost of the Disclosure Rule for Real Estate Transfers</b>					
<b>Variable</b>	<b>Primary Value</b>	<b>Alternative Value</b>	<b>Cost Impact</b>		<b>Uncertainty Issue</b>
			<b>Absolute Change</b>	<b>Percent Change</b>	
<b>Costs for Sales Transactions</b>					
Time for Compliance - Start-Up: - Disclosure: - Record-Keeping:	1 hour 5 min. 0.5 min.	2 hours 10 min. 1 min.	\$46,600,000	94.4%	Primary value based on “soft” estimate of range of values.
Number of Offers per sale	2	3	\$9,427,000	19.1%	Primary value based on lower end of “typical” range.
Start-Up Costs for Mortgage Lenders and Attorneys	0	1 hour	\$940,000	1.9%	Primary value assigns no cost.
<b>Costs for Rental Transactions</b>					
Time for Compliance - Start-Up: - Disclosure: - Record-Keeping:	1 hour 5 min. 0.5 min.	2 hours 10 min. 1 min.	\$28,585,000	89.5%	Primary value based on “soft” estimate of range of values.
Number of Disclosure Events per Rental Transaction	1	2	\$28,931,000	90.6%	Primary value based on “soft” estimate of how disclosure requirement would affect a rental transaction.
Source: U.S. Environmental Protection Agency					

For sales, the total cost is most sensitive to the change in time for compliance. Virtually all of the cost effect

is linearly related to time, so that a doubling in time nearly doubles the total cost: 94.4 percent, or an absolute increase of \$46.6 million from \$49.4 million to \$96.0 million. The change in number of offers per sale produces a smaller but still sizable change in cost: 19.1 percent or an absolute increase of \$9.4 million to \$58.8 million. The addition of start-up costs for lenders and attorneys has a minimal effect, increasing total annual compliance costs by 1.9 percent or \$0.9 million.

For rentals, the effect of doubling the compliance time estimates is similar to that observed for sales: doubling the compliance time allowance increases the total annual compliance cost by \$28.6 million or 89.5 percent as costs increase from \$31.9 million to \$60.5 million. Increasing the number of disclosure events per rental transaction from 1 to 2 has a similar effect, raising total compliance cost by \$28.9 million or 90.6 percent.

### **Compliance Monitoring Costs to Private Parties**

The procedure, scope and frequency of compliance monitoring activities for the disclosure rule remain somewhat uncertain. At present, EPA expects to perform both programmed compliance monitoring activities and actions in response to complaints regarding failure of responsible parties (i.e., sellers, lessors, and sales or rental agents) to comply with disclosure rule requirements. Although substantial uncertainty surrounds the annual number of compliance monitoring events, it is possible to estimate the unit costs for a hypothetical compliance monitoring event.

The hypothetical compliance monitoring event assumes that EPA will conduct an on-site compliance audit on parties that have been identified as possibly not complying with the disclosure rule. The audit would involve reviewing documentation for a sample of transactions that are subject to the rule. For estimating the costs of the hypothetical compliance monitoring event, EPA assumed that the auditor would work with a clerk for the audited party to retrieve and review the compliance documents for a sample of 10 transactions. If the review of the sample transactions indicated that the audited party had failed to comply with the disclosure rule requirements, then the auditor would undertake a more thorough review of transactions that are subject to the rule. However, this analysis does not consider the costs of this more thorough review.

The activities involved in compliance monitoring therefore include: locating and retrieving the compliance documents for each of the ten transactions; making copies; and re-filing the originals. The cost of compliance includes *Cost of Time* and *Cost of Materials*:

- Cost of Time. About 1 hour is estimated as the time for retrieving, copying, and re-filing the original compliance documents (i.e., the signed and dated disclosure and acknowledgment statements). For the labor cost of this activity, EPA used the same hourly labor rate as used for calculating the cost to lending organizations for compliance with the disclosure rule. The total unit hourly cost of \$15.42 (including the 64 percent allowance for fringe and overhead) is based on the average weekly earnings in 1994 for persons in the “Financial Records Processing” occupational category (*Employment and Earnings*, Bureau of Labor Statistics, January 1995). Thus, at one hour of effort, the cost of time is estimated at \$15.42.
- Cost of Materials. Materials costs includes the cost of copies (10 transactions x 1 page per transaction x \$0.04 per page), which amounts to \$0.40.

For this hypothetical case, the cost to affected parties is therefore estimated at \$15.82 per compliance monitoring event or \$1.58 for each of the ten transactions assumed to be audited.

Whether the total costs to private parties for compliance monitoring activities will add substantially to the total costs of regulatory compliance will depend on the volume of compliance monitoring events undertaken

annually by EPA. To illustrate, to cause a one percent increase (\$813,000) in the estimated total annual cost of compliance for real estate transfers (\$81.3 million in 1994 dollars), EPA would have to monitor approximately 514,000 transactions or about 4.2 percent of the 12.2 million sale and rental transactions estimated to be subject to the rule annually. If each compliance monitoring event involved 10 transactions, as specified in the hypothetical case above, EPA would therefore need to conduct 51,400 audits. As discussed in the next section, EPA currently anticipates that the compliance and monitoring activity will involve substantially fewer audits — 500-1,000 per year — than would be required to achieve a one percent increase in the total costs of regulatory compliance. Accordingly, the costs borne by affected private parties for compliance monitoring activities are not likely to add substantially to the total costs of complying with the disclosure rule for real estate transfers.

#### **COSTS TO GOVERNMENT FOR ADMINISTERING THE DISCLOSURE REGULATION FOR REAL ESTATE TRANSFERS**

To ensure compliance with the final regulation, resources will be required to conduct a number of activities, including:

- Inspections;
- Violation case management;
- Establishment and maintenance of cooperative agreements, if applicable;
- Compliance assistance;
- Development of performance measurement criteria; and
- Management.

In estimating the magnitude of the resource requirements associated with these activities, EPA took into account its overall program needs; that is, rules which provide for the disclosure of information prior to residential remodeling or renovation activities and rules which establish standards for conducting lead-based paint activities (e.g., risk assessment, abatement) are also under development, and resource commitments made to satisfy one program goal may also serve to satisfy similar needs associated with an alternate goal. Nevertheless, to the extent that overall resource requirements could be apportioned to achieving the goals of the rules for information disclosure at the time of real property transfer, the estimates which follow are intended to represent costs to the government solely for the purposes of ensuring compliance with those rules.

Estimates in this section are based on preliminary recommendations of and discussions held by EPA enforcement and compliance personnel and draw on experiences in other program areas (e.g., PCBs, asbestos, pesticides, and EPCRA).

#### **Inspection and Case Management Costs**

To most accurately project costs associated with these activities, the frequency of inspections and resultant rate of violations is required. Because these rules are to form part of a new program, it is at this time unknown what level of effort will be deemed appropriate. For illustrative purposes, an inspection rate ranging between 500-1,000 per year (10-20 per state) is incorporated into this analysis, resulting in an estimated federal personnel increase of 25-50 full-time equivalent positions (FTEs), or an average of 2.5-5.0 FTEs per EPA region. In addition, a 0.5 FTE increase in headquarters staffing is assumed to be required to permit

national coordination of inspector training, inspection and case development guidance, and compliance monitoring strategy development.

### **Performance Measurement and Management**

It is assumed that 5.0 FTE (0.5 per EPA region) will be necessary to perform tracking and management of program activities so that appropriate measures of success may be developed. While these resources are assumed to be constant on an annual basis in this analysis, more effort may be required up-front to assess alternative strategies.

### **Compliance Assistance**

Compliance assistance activities involve outreach to inform and educate the regulated community. Such activities may be undertaken at both the EPA headquarters and regional offices. As explained above in connection with inspection and case management activities, the level of effort required is unknown. For the purposes of this analysis, it is assumed that FTE increases of 0.5 for headquarters and 1.0 for regional offices (0.1 per EPA region) will be necessary to ensure that the regulated community is aware of the requirements of the information disclosure rules and is kept abreast of any policy or interpretive modifications as the program matures.

### **Total Costs to Government**

Total costs were estimated by summing the assumed FTE needs for each major activity area described above and multiplying the total by the estimated annual cost per FTE.

Total FTE requirements =

$$(25.0+0.5) + 5.0 + 1.5 = \underline{32} \text{ (low)}$$

$$(50.0+0.5) + 5.0 + 1.5 = \underline{57} \text{ (high)}$$

Cost/FTE =

$$(\$68,861 + \$82,954)/2 = \underline{\$75,908}^8$$

$$\text{TOTAL COST} = \underline{\$2,429,056} \text{ (low)} - \underline{\$4,326,756} \text{ (high)}$$

This range represents the upper-end estimate of intramural Agency resource requirements, given the inspection frequencies specified above. It is assumed that extramural resource needs will also be identified, to allow for the addition of Senior Environmental Employment (SEE) inspectors. Total costs may, therefore, exceed the estimates presented above, though tradeoffs between intramural and extramural resources could result in overall costs in fact falling within the range developed.

### **TOTAL COSTS TO PRIVATE PARTIES AND GOVERNMENT OF THE DISCLOSURE REGULATION FOR REAL ESTATE TRANSFERS**

The estimated costs to private parties and the federal government were summed to yield a comprehensive estimate of the total annual costs of the lead-based paint hazard disclosure regulation for real estate transfers. *Exhibit 12, Estimated Total Annual Costs of the Disclosure Rule for Real Estate Transfers*, summarizes this

---

<sup>8</sup> Average of the fully-loaded wage rates for GS-12 and GS-13 employees, \$1994.

calculation.

The estimated total annual costs range from \$83.7 million, based on the low estimate of government administrative costs and the 3 percent discount rate for annualizing one-time outlays, to \$85.9 million, based on the high estimate of government administrative costs and the 7 percent discount rate for annualizing one-time outlays.

<b>Exhibit 12: Estimated Total Annual Costs of the Disclosure Rule for Real Estate Transfers</b>		
<b>Cost Category</b>	<b>Estimated Cost (1994 dollars)</b>	
	<b>at 3 percent rate</b>	<b>at 7 percent rate</b>
<b>Costs to Private Parties</b>		
Total Costs for Sale Transactions:	\$49.4 million	\$49.6 million
Total Costs for Rental Transactions:	\$31.9 million	\$32.1 million
<b>Total Annual Costs to Private Parties:</b>	<b>\$81.3 million</b>	<b>\$81.6 million</b>
<b>Costs to Government</b>		
Low Estimate (lower annual inspection rate)	\$2.4 million	
High Estimate (higher annual inspection rate)	\$4.3 million	
<b>Total Annual Costs</b>		
Based on Low Estimate of Government Costs	\$83.7 million	\$84.0 million
Based on High Estimate of Government Costs	\$85.6 million	\$85.9 million
Source: U.S. Environmental Protection Agency		

Intentionally Blank Page

## **CHAPTER 4**

### **EFFECT OF THE LEAD PAINT HAZARD DISCLOSURE RULE FOR REAL ESTATE TRANSFERS ON SMALL BUSINESSES - REGULATORY FLEXIBILITY ANALYSIS**

EPA investigated the potential impacts of the rule on small businesses, and has prepared a Regulatory Flexibility Analysis (RFA), in accordance with EPA guidelines. While a large number of small establishments will be potentially affected by the rule, cost impacts were not found to be of sufficient magnitude to cause undue harm to such establishments. Consequently, EPA did not further modify the regulation based on small business impact considerations. EPA's RFA is presented in this chapter. The first section provides a brief introduction regarding EPA's approach in considering and analyzing small business impacts. The next section reviews the participation of small businesses in the affected industries, while the final section uses compliance cost estimates from the previous chapter together with example information on small business operations and cost to illustrate the rule's likely effects on small businesses.

#### **BACKGROUND AND APPROACH**

In formulating an approach for the RFA, certain preliminary steps are recommended. First, statutory authority to consider regulatory options should be established. EPA has determined that, under the Lead-Based Paint Hazard Reduction Act of 1992, the Agency has discretion in prescribing record-keeping requirements to facilitate enforcement of regulations promulgated pursuant to the Act. Thus, in the event that regulatory burdens should prove too severe for smaller establishments, the Agency could seek to tailor its record-keeping provisions to mitigate such impacts. However, as demonstrated in the RFA, cost impacts were not found to be of sufficient magnitude to justify the formulation of regulatory alternatives. In fact, small businesses were found to constitute the majority of affected establishments; consequently, the final regulation reflects the government's concern for small business in that all provisions were carefully crafted to minimize impacts on all regulated entities.

EPA also considered how it would define a small business concern for this regulatory action. EPA has considered businesses employing 1 to 10 workers as small entities, and this definition is both appropriate and very likely consistent with the level of economic activity recognized in 13 CFR Part 121 for businesses in sectors affected by the rule (\$1.0 [excluding commissions] to \$10 million annual revenues). Thus, EPA is not seeking to establish alternative definitions of small entities in connection with this rulemaking.

The following sections of the RFA include a profile of affected businesses, segmented by employment size class, and a financial analysis in which regulatory costs are measured against labor and overhead expenses for a "typical" small establishment in each affected sector.

#### **ROLE OF SMALL BUSINESSES IN AFFECTED INDUSTRIES**

As discussed in the preceding chapters, the disclosure rule for transfers will impose requirements on businesses that participate in the sale and rental of residential real estate. Two business groups were identified as being directly affected by the rule's requirements: Real Estate Operators and Lessors (SIC code 651) and Real Estate Agents and Managers (SIC code 653). Both business groups are comprised predominantly of "small business entities." As such, the costs of complying with the disclosure rule will largely fall on small businesses.

As shown in *Exhibit 13, Small Business Participation in Affected Business Sectors*, both of the affected SIC groups are dominated by small establishments as defined on the basis of number of employees. Using Bureau of the Census data for 1990, Exhibit 13 summarizes the number of establishments, number of employees and annual payroll for establishments of different employment size classes. For both business groups, more than

70 percent of establishments fall in the smallest employment size classification — 1-4 employees — and more than 90 percent of establishments have less than 20 employees. Thus, by any reasonable standard, the vast preponderance of establishments in these business groups are small businesses.

<b>Exhibit 13: Small Business Participation in Affected Business Sectors, 1992</b>						
Establishments, Employment and Payroll by Employment Size Class						
Data Item	Total	Employment Size Class (number of employees)				
		1-4	5-9	10-19	20-49	50 or more
<i>Real Estate Operators and Lessors (SIC code 651)</i>						
Number Establishments	91,607	68,629	13,809	5,663	2,475	1,031
Number Employees	474,751	113,634	88,951	74,106	74,041	124,019
Annual Payroll (\$000)	8,324,133	1,900,863	1,506,028	1,352,557	1,358,370	2,206,315
Payroll per Establishment	90,868	27,698	109,061	238,841	548,836	2,139,976
Payroll per Employee	17,534	16,728	16,931	18,252	18,346	17,790
Percent of Total						
- Number Establishments	100.00%	74.92%	15.07%	6.18%	2.70%	1.13%
- Number Employees	100.00%	23.94%	18.74%	15.61%	15.60%	26.12%
Cumulative Percentage						
- Number Establishments		74.92%	89.99%	96.17%	98.87%	100.00%
- Number Employees		23.94%	42.67%	58.28%	73.88%	100.00%
<i>Real Estate Agents and Managers (SIC code 653)</i>						
Number Establishments	92,086	66,863	13,253	6,428	3,713	1,829
Number Employees	637,222	108,286	85,775	85,203	111,179	246,779
Annual Payroll (\$000)	14,973,843	2,499,336	2,010,964	2,071,816	2,596,775	5,794,952
Payroll per Establishment	162,607	37,380	151,737	322,311	699,374	3,168,372
Payroll per Employee	23,499	23,081	23,445	24,316	23,357	23,482
Percent of Total						
- Number Establishments	100.00%	72.61%	14.39%	6.98%	4.03%	1.99%
- Number Employees	100.00%	16.99%	13.46%	13.37%	17.45%	38.73%
Cumulative Percentage						
- Number Establishments		72.61%	87.00%	93.98%	98.01%	100.00%
- Number Employees		16.99%	30.45%	43.83%	61.27%	100.00%
Source: U.S. Department of Commerce, Bureau of the Census, <i>County Business Patterns, 1992</i> , January 1995.						

Small businesses also account for a sizable share of total employment in these business groups. In the Real Estate Operators and Lessors group (SIC 651), establishments with less than 20 employees account for 58 percent of total employment. In the Real Estate Agents and Managers group (SIC 653), a smaller but still substantial share of employment, 44 percent, is accounted for by establishments with fewer than 20 employees.

#### ASSESSMENT OF EFFECTS ON SMALL BUSINESSES

To assess the effect of the disclosure rule for transfers on small businesses, the cost estimates presented in Chapter 3 were applied to example small establishments in the real estate sales and rental businesses. By comparing the costs imposed by the rule to the estimated *pre-compliance* costs for example small business establishments, it is possible to gain insight into the likely significance of effects on small businesses. If the disclosure rule's costs are substantial in relation to establishments' existing costs — five percent or more — then the disclosure rule may be found to impose a significant cost burden on small businesses. Conversely, compliance costs that are less than five percent of existing costs should be able to be managed more easily.

For this analysis, example small business establishments were structured in terms of number of employees, and gross annual cost of employment and overhead. The choice of number of employees for the example establishments is somewhat arbitrary but falls within the range of small businesses and further reflects information obtained in conversations with representatives of businesses likely to be affected by the rule. Unit hourly costs of employment and overhead are the same values as those on which the aggregate cost estimates presented in Chapter 3 are based. The estimated annual costs of compliance for the example businesses require three components:

1. Cost estimates from Chapter 3 of the unit values for both the start-up costs (per employee with disclosure rule responsibilities) and the unit costs per affected transaction.
2. Estimated fraction of employment in a small business with responsibilities under the disclosure rule. This value is needed to assign start-up costs to the example business.
3. Estimated number of transactions per year that would be subject to the disclosure rule. The volume of affected transactions is the most important variable affecting the estimated cost to a business from compliance with the disclosure rule. The values for both the numbers of transactions per year and the fraction of employment with disclosure rule responsibilities were estimated from conversations with representatives of businesses likely to be affected by the disclosure rule.

The example establishments are not meant to be rigorously defined representative models of establishments operating in the affected business groups. However, they are meant to serve as credible illustrations of the cost impacts of the disclosure rule on small businesses.

Example establishments for assessment of the disclosure rule for transfers were defined and analyzed for three organizations:

1. A 10-person organization primarily engaged in residential sales;
2. A 5-person organization primarily engaged in residential rentals; and
3. A 10-person organization engaged in both sales and rentals.

The definition of the organizations and related analytic findings are discussed below for each organization.

### **Organization Primarily Engaged in Residential Sales**

From conversations with real estate firms, it was determined that a 10-person organization was reasonable for illustrating a small real estate sales organization. Gross annual, pre-compliance labor and overhead costs were calculated on a baseline, or pre-regulation, basis as the product of the number of persons (10), the average hourly earnings with overhead for persons in the real estate sales business (\$19.71, see Exhibit 5, page 25), and an assumed 2,080 hours per year. The resulting value of \$410,000 per year is compared with the estimated annual costs of compliance to provide insight into the significance of disclosure rule compliance costs to small businesses (*Exhibit 14, Illustration of Effects of Disclosure Rule for Transfers on Small Businesses*, summarizes the calculations leading to the estimated costs to the example real estate organizations.). It may be noted that real estate agents are not typically compensated as salaried employees but earn their income through commissions on sales. However, whether the gross employment cost is considered a payroll obligation or a payment contingent on performance is irrelevant for the analysis as, either way, it provides a measure of the expected gross payments to persons who are associated with the example small business organization *plus overhead*.

<b>Exhibit 14: Illustration of Effects of Disclosure Rule for Transfers on Small Businesses</b>							
<b>Organization</b>	<b>Number Persons</b>	<b>Number with Disclosure Rule Responsibility</b>	<b>Costs to Organization</b>		<b>Number of Disclosure Event Transactions</b>		
			<b>Start-Up, per person</b>	<b>All other, per event</b>	<b>Low Estimate</b>	<b>High Estimate</b>	
Real Estate Sales	10	10	\$19.71	\$6.06	100	250	
Real Estate Rentals	5	5	\$19.71	\$2.17	150	400	
Sales and Rentals together	10	10	\$19.71		250	650	

  

<b>Organization</b>	<b>First-Year Compliance Costs</b>					<b>Estimated Labor and Overhead Cost, <i>pre- Regulation</i></b>	<b>Compliance Cost as a Percentage of Labor and Overhead Costs</b>	
	<b>First Year Start-Up</b>	<b>Transaction Costs</b>		<b>Total First-Year Compliance Cost</b>			<b>Low</b>	<b>High</b>
		<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>			
Real Estate Sales	\$197	\$606	\$1,514	\$803	\$1,711	\$410,000	0.20%	0.42%
Real Estate Rentals	\$99	\$326	\$868	\$425	\$967	\$205,000	0.21%	0.47%
Sales and Rentals together	\$197	\$932	\$2,382	\$1,129	\$2,579	\$410,000	0.28%	0.63%

Costs in 1994 dollars.  
Source: U.S. Environmental Protection Agency

Conversations with real estate organizations also indicated that typically 80 to 90 percent of the people in a real estate sales organization would be involved in sales activities and thus would have direct responsibility for knowing and performing the disclosure rule's requirements. However, non-sales people may also have responsibility for preparing or filing compliance-related materials. Therefore, for this analysis, it was assumed that all persons in the organization would need to learn the disclosure rule's requirements and thus the start-up cost per person of \$19.71 is assumed to be incurred for 10 persons, for a total start-up cost of \$197 (see Exhibit 14). As discussed in Chapter 3, the start-up cost would be expected to generate value for more than one year and in the analysis of aggregate costs of the rule, the start-up cost was annualized over a several year time-frame. However, to be conservative in assessing the effect of disclosure rule costs on small businesses, the start-up cost is not annualized but treated as a direct cash outlay occurring in the year that serves as the basis of the analysis. In this regard, the example analysis may be interpreted as representing the *first-year* of compliance with the rule. In subsequent years, the start-up cost would be incurred only for new persons in the real estate organization.

The critical item for the analysis is the number of sales transactions that would be expected to be subject to the disclosure rule. Real estate agents indicated that the number of transactions per year in a 10-person organization could vary over a wide range. For example, in a good year, a 10-person organization might participate in as many as 250 transactions but, in a poor year, might record less than 100 transactions. Because of the possibility that an organization might operate in an area in which virtually all transactions would involve target housing, no reduction was made to the number of transactions to account for the possibility that sales would fall outside the disclosure rule's requirements. A range of 100 to 250 transactions was used in this analysis.

Costs per transaction were calculated from the rule's estimated costs to real estate agents as presented in Chapter 3. Specifically, the costs to real estate agents for each of the three cost categories — disclosure event, record-keeping, and materials — were divided by the number of transactions to yield a unit cost per sale of target housing: \$6.06. To be conservative, in performing this calculation, no credit was given for the

expected lower costs in states already having a disclosure rule. That is, the *unit cost* for the disclosure event was calculated using the aggregate costs and number of transactions for only states without a disclosure rule. The product of the number of transactions and the unit cost yields the gross annual cost of transactions to the organization, or \$606 at the low estimate of number of transactions and \$1,514 at the high estimate. Summing the start-up costs and the transaction costs yields total compliance cost estimates of \$803 and \$1,711, for the low and high estimates of number of transactions, respectively (see Exhibit 14).

To gauge the effect of these costs on the example small business, the gross costs were divided by the estimated annual labor and overhead costs for the organization, \$410,000. For both the low and high number of transaction values, annual compliance costs are well less than one percent of the estimated annual labor and overhead costs for the organization. Specifically, at the high estimate for number of transactions, compliance costs were 0.42 percent of annual labor and overhead costs, and, at the low estimate for number of transactions, 0.20 percent (see Exhibit 2).

### **Organization Primarily Engaged in Residential Rentals**

From conversations with real estate firms, it was determined that residential rental organizations would typically be smaller than sales oriented organizations and a 5-person organization was thus used as the basis for the rental organization analysis. As above, gross annual pre-compliance labor and overhead costs were calculated as the product of the number of persons (5), average hourly earnings (\$19.71), and assumed 2,080 hours per year with a resulting value of \$205,000 (see Exhibit 14).<sup>9</sup> As above, it was assumed that all persons in the organization would need to learn the disclosure rule's requirements and thus the start-up cost per person of \$19.71 is assumed to be incurred for 5 persons, for a total start-up cost of \$99 (see Exhibit 14).

Because of the lower value per transaction, a rental-oriented real estate organization must generate a volume of transactions than a sales-oriented organization to be financially successful. In the same way as for sales transactions, real estate agents indicated that the number of *rental* transactions per year in a 5-person organization could vary widely from a low of perhaps 150 rentals per year to 400 or more, which is the range used in this analysis. Following the same procedure as outlined for sales, the unit cost to real estate agents was calculated from the Chapter 3 results as \$2.17 per transaction. Thus, the estimated range of *transaction*-related costs incurred annually is \$326 to \$868. Summing the start-up and transaction costs yields total compliance cost estimates of \$425 and \$967, for the low and high estimates of number of transactions, respectively. Because of the higher volume of transactions per person, the rental organization's costs are slightly higher as a percentage of labor and overhead costs than the costs estimated for the sales organization but still less than one percent. At the high estimate for number of transactions, compliance costs were 0.47 percent of annual labor and overhead costs, and, at the low estimate for number of transactions, 0.21 percent (see Exhibit 14).

### **Organization Engaged in Residential Sales and Rentals**

To provide a modestly more conservative illustration of the effects on small businesses of the disclosure rule for transfers, the compliance costs for both the sales and rental organizations were blended in a single example business. Specifically, the 10-person sales organization was assumed to perform both the sales business previously analyzed and the rental business for the 5-person organization from the preceding discussion. From a calculation standpoint, the *transaction*-related compliance costs for the 5-person rental organization were added to the total costs for the 10-person sales organization while holding the organization's labor and overhead costs constant. In this way, the example sales organization is forced to bear

---

<sup>9</sup> The structure of calculations for rental organizations parallels that discussed above for sales organizations. Accordingly, the discussion for the additional example organizations is briefer in describing the structure of calculations.

the additional compliance costs associated with rental activity without an increase in the base labor and overhead costs to which compliance costs are compared. No additional cost burden is assumed for *start-up* costs since the start-up activity for sales is assumed to subsume that required for rentals.

Summing transactions-related costs for both sales and rentals yields total annual transactions costs of \$932 to \$2,382 at the low and high volumes of transactions, respectively. With the addition of start-up costs, total annual compliance costs come to \$1,129 and \$2,579, which amount to 0.28 percent and 0.63 percent of the organization's estimated labor and overhead costs. Thus, for both the low and high estimates of number of transactions, the disclosure rule's annual compliance costs remain below 1 percent of labor and overhead costs (see Exhibit 14).

## **CHAPTER 5**

### **ASSESSMENT OF BENEFITS**

The lead hazard disclosure rule for real estate transfers is expected to yield benefits by reducing exposure to the health hazards of lead-based paint by persons and households buying or renting target housing. Because of uncertainty regarding how households will respond to the information provided by the lead hazard disclosure requirements, it is not possible to quantify these benefits, either in terms of the numbers of adverse health effects avoided or in terms of the monetary value of those avoided adverse health effects. In lieu of a quantitative assessment, this chapter assesses qualitatively how the disclosure rule is expected to benefit households that would otherwise be exposed to health hazards from lead-based paint. To aid in understanding these benefits, the chapter first reviews the market imperfection present in real estate transfer transactions regarding lead-based paint hazards and then outlines the mechanisms of exposure to lead from lead-based paint and the associated health effects. The third section describes how the disclosure rule is expected to achieve benefits. The final section of the chapter reviews certain evolving approaches that may provide a basis for valuing the benefits of information-based regulations.

#### **UNDERSTANDING THE MARKET IMPERFECTION**

The market imperfection that the lead hazard disclosure rule for real estate transfers aims to correct is that prospective buyers and renters of housing frequently lack important information regarding the possible presence of lead-based paint and its associated hazards in housing units being considered for purchase or lease. The failure of the marketplace to provide this information means that prospective buyers and renters might purchase or lease a property, or make pricing or rental payment decisions regarding properties, without understanding possible health risks or risk management costs that may accompany the transaction. The disclosure rule attempts to remedy this imperfection by increasing the amount of information available to prospective buyers or renters regarding the possible presence of lead-based paint in a housing unit and the associated health risks. As a result, prospective buyers or renters will have better information on which to base decisions regarding whether and at what price to purchase or rent a housing unit, and whether to undertake abatement or other risk-management activities upon possession of the unit.

#### **EXPOSURE TO LEAD FROM LEAD-BASED PAINT AND RELATED ADVERSE HEALTH EFFECTS**

The reason that the lack of information in real estate transfers is of sufficient concern to warrant intervention in the market process is that exposure to lead from lead-based paint presents significant health risks. The documented health risks of exposure to lead include reduced intelligence in children, and increased probability of hypertension, stroke, heart disease and premature death in adults. The costs stemming from these health risks are born both by individuals who are affected by exposure to lead, and by society at large through increased health care and educational costs and losses in the economic productivity of affected individuals. This section reviews the mechanisms by which residents may be exposed to lead from lead-based paint in a household and summarizes information on the known health risks from exposure to lead.

The presence of lead-based paint in a housing unit presents a health risk because of the possibility that residents will take lead into their bodies. The mechanisms of bodily intake include inhalation and ingestion of paint dust and debris containing lead-based paint residue. Lead-based paint residue enters the environment in and around housing units in several ways, including flaking and chipping of paint from deteriorated paint surfaces, and formation of lead-containing dusts from the normal wear and tear of painted surfaces. Because of the friction and abrasion of normal usage, window and doors, in particular, contribute to formation of lead-containing dusts that may be ingested or inhaled. The scraping and sanding involved in preparation for painting also contributes to formation of lead-containing dusts.

Among household members, young children are generally considered at higher risk of lead intake because of the frequency of hand-to-mouth activity and the likelihood of their inhaling dusts from floors and window wells. Young children may also chew paint from otherwise intact surfaces that are within their reach such as window sills and doors. The intake of lead-containing materials by children is not only a risk inside a housing unit but also outside as paint dusts, both from normal deterioration and preparation work for exterior painting, may contaminate the soils in children's play areas. Adults and older children are also subject to the risk of lead intake through inhalation of dusts, preparation and eating of foods without proper washing of hands, and preparation of foods in areas where lead-containing dusts have accumulated.

Numerous studies, including several by the U.S. Environmental Protection Agency (EPA), have documented the adverse human health effects associated with exposure to lead. In a pioneering study, Schwartz *et al.* quantified a number of health benefits that would result from reductions in lead content of gasoline. The work was extended by EPA's analysis of lead in drinking water and by an EPA-funded study of alternative lead National Ambient Air Quality Standards. Although uncertainty remains as to the full extent of the health impacts, these studies have all shown that lead has significant adverse effects on humans. In addition, recent studies suggest that there is virtually no "safe" threshold for exposure to lead. The documented human health effects associated with lead exposure include the following:

For Men: hypertension; cancer; heart disease, stroke, and premature death.

For Women: possible hypertension, heart disease, stroke and death; cancer; fetal effects from maternal exposure, including diminished childhood IQ, premature birth, and reduced birth weight; and possible increases in infant mortality resulting from maternal exposure.

For Children: reduced intelligence; interference with growth; impaired hearing; behavioral changes; interference with peripheral nervous system development; metabolic effects, impaired heme synthesis, and anemia; and cancer.

Within these population groups, EPA has identified two groups that are believed to be at particular risk from the hazards of lead-based paint: children less than seven years of age and pregnant women. Infants and young children are at particular risk because of the greater likelihood of intake of lead-contaminated dusts or paint debris in a housing unit containing lead-based paint, and the relatively low levels of lead intake that cause adverse health effects. Pregnant women are considered a high risk population primarily as a surrogate for the fetus. Exposure to lead before or during pregnancy may have severe effects on fetal development, including miscarriage.

These health effects are costly to both the affected individuals and society because of the pain and suffering associated with the adverse health effects, increased health care costs, increased education expenses for children, and lower economic performance associated with less productive individuals and lost work days from morbidity and premature mortality. The avoidance of these health effects and their associated costs are the benefits of the disclosure rule.

## **BENEFITS OF THE DISCLOSURE RULE**

The lead-based paint hazard disclosure rule requires that information about the possible presence of lead-based paint and associated hazards be given to prospective buyers or renters of housing units that, because of the time of their construction, may contain lead-based paint. It is expected that this information will lead buyers and renters to modify their behavior in a way that will reduce health risks from lead-based paint and thus achieve benefits to society. However, the extent to which these benefits will occur depends on how transaction participants respond to the additional information. The regulation does not require housing buyers and renters to modify their behavior; rather it provides them additional information on which to make

decisions regarding purchase or rental and avoidance of the hazards of lead-based paint. Currently, data are not available to permit estimation of how prospective buyers and renters are likely to modify their behavior in response to the information disclosed as a result of the lead hazard disclosure rule. Accordingly, it is not possible to quantify the rule's expected benefits. However, it is possible to assess the likely mechanisms of personal and market response to the information provided by the disclosure rule and thus understand how the disclosure rule is expected to benefit households that would otherwise be exposed to health hazards from lead-based paint.

Response mechanisms by which the disclosure rule would be expected to generate benefits through avoidance of lead-based paint hazards include the following:

- Because of the information provided by the disclosure rule, households that rent or buy housing units containing lead-based paint hazards may be more likely to undertake abatement activities or exercise other precautions to eliminate or reduce the health risks from deteriorated lead-based paint. Such actions would be expected to reduce directly the likelihood that residents of the household would be exposed to lead, and thus to yield benefits from avoided adverse health effects. If households respond by undertaking abatement activities, these actions may require substantial monetary outlays. However, even if abatement is not undertaken, less expensive and even low cost measures may substantially reduce the risk from exposure to lead in lead-based paint. For example, maintenance of painted surfaces and regular, careful cleaning of areas in which lead-based paint debris or dust accumulates can reduce health risks. The reduction in these health risks, whether by abatement or other precautionary activity, would generate benefits as a result of the disclosure rule.
- As a result of the information regarding possible presence of lead-based paint and its associated hazards, households with young children and/or pregnant women may be less likely to purchase or rent housing units containing lead-based paint hazards. That is, if alternative housing is available that does not present a lead-based paint hazard, households with higher risk individuals may choose to buy or rent such alternative housing. Such a response would be expected to reduce the frequency with which children and pregnant women live in housing units that may present a lead-based paint hazard, thus yielding benefits from reduced exposure by these more susceptible members of the population to lead-related health risks. This response is qualitatively different from the first discussed above in that the household does not undertake abatement or risk management activity before or while living in the housing unit. On the surface, this response appears to not require any out-of-pocket cost for reducing or avoiding lead-based paint hazards. However, a systematic shift by a segment of the market to favor purchase or rental of housing containing no lead-based paint hazards would be expected to result in a price premium for such housing compared to otherwise comparable housing *with* such hazards. Thus, the decision to purchase or rent housing without lead-based paint hazards is not likely to be costless.
- Market forces may induce property owners to undertake abatement activity before selling or renting property containing lead-based paint hazards. As discussed above, because of the disclosure rule, some prospective buyers and renters may become reluctant to buy or rent units containing lead-based paint hazards and thus assign a higher value to housing units that are known to not contain lead-based paint hazards. As a result, sellers and lessors of target housing may receive lower prices and rents, or see their units remain on the market for longer periods before being purchased or rented, relative to otherwise comparable units that do not contain lead-based paint hazards. However, the property owner should be able to avoid this diminution in market value by undertaking abatement activity and obtaining a certified report for the unit declaring it free of lead-based paint hazard. To the extent that sellers and lessors of target

housing undertake such abatement activity, the disclosure rule will generate benefits through avoidance of lead-related health risks by the subsequent buyers or renters of the abated units. The net benefit of these activities that is attributable to the disclosure rule will be the amount by which the economic value to society from reducing lead-based paint hazards exceeds the cost of abating those hazards.

While it is not possible to estimate the quantitative extent of these responses, it is certain that the disclosure rule will provide the information base that would be expected to yield such personal and market responses.

## **METHODOLOGICAL OPTIONS FOR PREDICTING RESPONSE TO INFORMATION PRODUCTS**

As noted above, EPA has not quantified the estimated benefits of the rule. An information base and the associated accepted analytic methods necessary to predict consumer reaction to information products on lead-based paint hazards are not readily available; thus, quantifying the expected benefits of this rule would be extremely difficult. Given the high level of uncertainty associated with the results from such a quantitative analysis, and given the prescriptive nature of section 1018 of the Act, EPA and HUD believe that the information provided in the qualitative analysis presented above served to inform decision-making in this case.

Nevertheless, it may be useful to briefly review certain approaches currently evolving and which may be seen as a starting point in an effort to expand the level of understanding of how information products may be “valued” and used to modify behavior. The rule would provide two kinds of information: 1) a lead information pamphlet developed by HUD and EPA that must be provided to renters/buyers; and 2) information about the presence of or abatement of lead in the specific unit being considered for rent or purchase.

First, the “value” of information to the public might be developed via a contingent valuation type study. Such a study would seek to obtain a dollar equivalent representing the amount a recipient of the information would be willing to pay to acquire it. Since many members of the public may not be fully aware of the reasons behind the distribution of the information, the methodology would need to ensure that all respondents are provided with adequate background materials on the intended purpose of the information so that a more meaningful response can be made.

A second approach for estimating the value of the information would be to estimate transaction costs to buyers and renters of obtaining similar information from currently available sources, to the extent it is available. By providing the information directly, the rule would save users of the information the trouble and costs of obtaining comparable information through their own effort. These benefits accrue to individuals who would have sought out the information anyway or who find the information of some value but would not have spent the time and/or money to acquire it through available sources because of the transaction costs.

While this approach may permit the development of an estimate representing the costs to individuals seeking similar information, actual costs to duplicate the information provided under the rule would be considerably higher. This is because the information pamphlet provided by EPA and HUD will have been thoroughly researched and will have undergone peer and public review; thus, the quality of information provided by EPA and HUD would be expected to exceed that collected by an individual homebuyer/renter. Also, certain information on the presence of lead paint hazards and/or abatement histories of specific housing units would most likely be unavailable or, when available, obtainable only at much higher cost from other sources.

Since it is expected that information provided to the public will lead many recipients to modify their behavior, a third approach to estimate the benefits of the regulation would be to assess the potential outcomes of the provision of information. One approach to studying behavioral impacts would be to examine

behavioral changes in response to similar types of information dissemination events. These behavioral changes could then be evaluated to assess the extent to which beneficial impacts may be expected.

Such a study would be highly complex, since many factors may contribute to an individual's decision-making process. Thus, any research method designed to study the impacts of information alone would need to carefully account for numerous confounding variables. For example, under this rule, information may cause buyers and renters to modify their behavior in a way that may reduce health risks from exposure to deteriorated lead-based paint. However, changes in behavior, such as increased lead-paint abatement activities, may be influenced by a wide range of factors other than the information provided pursuant to this rule. Therefore, under this approach, it is extremely difficult to estimate the benefits of reduced health risks that would accrue as a result of this rule. Further, any estimate of benefits based on the outcome of behavioral change assumes that the information provided under the rule is accurate to the best of our current knowledge. However, if the information understates risks, renters/owners may take fewer actions than would be optimal. On the other hand, if the information provided by this rule turns out to overstate the true risks of lead-based paint in the home, some individuals may take actions that they otherwise would not have taken, leading to a suboptimal outcome.

Additionally, actions taken in response to new information will involve costs. To assess the net benefits to society from these actions, such costs would have to be estimated and subtracted from the expected benefits associated with the actions. However, because a number of possible outcomes with respect to risk management are possible (as discussed above), the magnitude and distribution of these cost impacts depend highly on how transaction participants interact in the market. That is, for any particular home offered for sale, the cost to manage any risk posed by lead-based paint hazards will vary due to buyer and market characteristics. Often, this cost may be borne by the seller (through, for instance, price concessions), although market situations may exist (for example, where a home is in particular demand) where costs could be borne by the buyer or shared between buyer and seller.

## **APPENDIX A: SUMMARY OF EXISTING STATE RULES REGARDING LEAD PAINT HAZARDS AND DISCLOSURE**

Several states currently have laws that require sellers to disclose information regarding the condition of residential property to prospective purchasers. In some cases, these laws may encompass or overlap some parts of the federal disclosure rule. As a result, the affected parties in those states may already be performing some of the disclosure-related activities that are required by the federal rule and compliance with the federal rule in these states may be less costly than in other states. However, even in states with an existing disclosure requirement, it is expected that affected businesses and persons will incur at least some of the costs of the disclosure rule for transfers. For example, affected parties will incur costs for materials that are specific to the rule (e.g. the Lead Hazard Pamphlet and Disclosure and Acknowledgment Statement), and will be subject to the rule's record-keeping requirements. To identify whether and to what extent some of the requirements of the federal disclosure rule may be offset by existing state rule requirements, a review of state rules was undertaken.

In general, two kinds of disclosure rules for real estate transfers were identified:

1. General disclosure rules. Several states currently have laws that require sellers to disclose information regarding the condition and contents of the property to prospective purchasers. These states include California, Delaware, Mississippi, Missouri, Oregon, Tennessee, Texas, and Wisconsin. The rules in these states require that sellers disclose a host of information regarding property condition including whether the seller is aware of any hazardous materials on the property, including but not limited to materials such as lead-based paint, asbestos, and radon. However, these rules do not target lead-based paint hazards specifically and neither the seller nor the real estate is required to provide information regarding the hazards of lead-based paint to prospective purchasers.
2. Environmental hazard disclosure rules. A few states have disclosure rules with respect to sales that are targeted at lead-based paint (and perhaps other environmental hazards) and provide information on its hazards. These states include Massachusetts, Rhode Island, and Maine. The rules of these states require explicit disclosure regarding the potential health hazards associated with lead-based paint and generally require signed acknowledgment by the prospective purchaser of being informed of the possible presence and hazards of lead-based paint.

The following three criteria were used to determine which rules overlap sufficiently with federal rule requirements to offset some of the costs of compliance with the federal disclosure rule:

- Does the rule require disclosure of the presence of lead-based paint?
- Is the seller or agent required to provide any information (either verbally or through written material) that is specific to the hazards associated with lead-based paint?
- Is the buyer required to acknowledge that he/she has been made aware of the hazards of lead-based paint and that the requirements of the disclosure rule with respect to lead-based specifically have been satisfied?

If a state's disclosure rule meets the first of these conditions and at least one of the remaining two, then affected parties in that state are already performing activities that are similar to the *sale-related disclosure requirements* the federal rule. Affected parties in these states are assumed to need half the time for disclosure for sales as that required in those states with no disclosure rule or whose rule does not meet the above condition. In short, disclosure requirements that ask if there is any known lead-based paint, but do not highlight the hazards of lead-based paint, or do not require acknowledgment by the buyer of having been

informed of those hazards are assumed to not overlap sufficiently with the federal disclosure requirements to result in reduced costs of compliance. No rules were deemed to contain requirements that would offset any of the federal rule's requirements with regard to rentals.

Of the rules reviewed, only the rules of Massachusetts, Rhode Island, and Maine were identified as meeting the above condition. Thus, compliance in these states is expected to be less costly than in other states because affected parties are already performing some of the disclosure-related activities that are required by the federal rule.

Below, the rules of Massachusetts, Rhode Island, and Maine are summarized. In addition, the rule for California is also reviewed as an example of a more general disclosure rule that was judged to not result in reduced compliance costs.

## **MASSACHUSETTS**

Chapter 773 of the Acts of 1987 authorizes the Childhood Lead Poisoning Prevention Program to prepare a packet that sellers or real estate agents are required to distribute to prospective purchasers of residential property constructed prior to 1978. The packet informs prospective purchasers about lead poisoning and the requirements of the Massachusetts Lead Law and regulations. A signed and dated acknowledgment must be obtained from the buyer stating that the packet was provided prior to the signing of a purchase and sale agreement. In addition to the notification package, any information known to the seller or real estate broker regarding the presence of dangerous levels of lead in paint, soil or other materials and any letter of compliance must be provided to the prospective purchaser.

The legislation also requires that a real estate agent who has provided a prospective purchaser with the notification package verbally inform the prospective purchaser about the possible presence of lead hazards and provisions of the Lead Law and regulations. After receiving the notice, the prospective purchaser has at least 10 days, or longer if agreed to by seller and purchaser, to have a lead paint inspection done, although an inspection is not required.

## **RHODE ISLAND**

The Lead Poisoning Prevention Act becomes effective June 1, 1993. Section 23-24.6-16 of this act refers to notification prior to transfer of residential property. The rule states that every purchase and sale contract for residential property will include language that requires the seller to provide the buyer with a copy of any lead inspection report in the seller's possession, and to notify the buyer of any known lead poisoning problem. The absence of this language in the contract does not void the sale, but places civil penalties on the seller and or agent. In addition, the rule states that written materials concerning environmental lead exposures and lead hazards are to be made available to real estate brokers and the general public.

Section 23-24.6-15 of this act deals with lead inspections of rental property. The legislation sets up a program by which state inspectors will conduct extensive lead inspections in response to complaints by occupants of rental property with children under the age of six. The landlord/owner is then required to provide the results of such an inspection to the occupants within 5 business days from the time they receive the report. In addition, the results of such an inspection must be presented to all prospective tenants before occupancy or prior to signing a lease agreement. This requirement to inform all prospective tenants is waived if the owner obtains a certification of lead abatement for the dwelling.

## **MAINE**

The Maine Real Estate Commission License Law requires licensed agents to ask sellers about any known hazardous materials that may affect the health and well-being of prospective purchasers. Such materials include, but are not limited to, lead-based paint. Any information regarding the presence of lead-based paint, the source of this information and whether there is any cracking peeling or flaking of paint must be given to a prospective purchaser in writing before or during preparation of an offer. If no information is known to the seller than this must be made known to the prospective buyer in writing.

The agent is required to present a written statement to the buyer encouraging the buyer to seek information from professionals regarding any specific issues or concerns. Under the Maine legislation, the state is required to prepare an information pamphlet for distribution to real estate agents and the general public which contains information on environmental hazards in housing, including the hazards of lead-based paint.

## **CALIFORNIA**

The California Civil Code includes language that applies to disclosure of lead-based paint hazards in a sales transaction. The law requires that a disclosure form be completed and signed by the seller prior to the sale of residential property. This disclosure form asks if there are any substances, materials or products which may be an environmental hazard, such as, but not limited to, lead-based paint. The disclosure form asks a number of other questions relating to the condition and contents of the property. The seller is required to answer yes or no to these questions, and to provide additional information if the answer is yes. Failure to comply with provisions of the article does not invalidate the sale of property. If any disclosure or relevant information is submitted after an offer to purchase has been submitted, the transferee can terminate his/her offer by written notice of termination. The prospective buyer is allowed 3 days after personal delivery of disclosure or five days after mail deposit delivery to terminate sale.

The disclosure form also states that “the buyers and sellers may wish to obtain professional advise and/or inspections of the property and to provide for appropriate provisions in a contract between buyer and seller with respect to any advice/inspections/defects.” If a real estate agent participates in the sale of the subject property, the agent is required to exercise reasonable diligence in verifying that the information provided by a seller is accurate. Failure by the agent to meet the act’s standards would expose an agent to penalties under the act.

Intentionally Blank Page

## APPENDIX B: DATA SOURCES

Data sources include text materials and information received through telephone conversations or written communication.

### TEXT CITATIONS

Blalock, Joe. Economic Commentary. *Economic Outlook*, Vol. 1, No. 2, February 1993.

Consad Research Corporation. *Economic Analysis of OSHA's Interim Final Standard for Lead in Construction*, Pittsburgh, PA, April 1993.

California Civil Code, Article 1.5, Disclosures Upon Transfer of Residential Property.

Code of Massachusetts Regulations, 105 CMR 460.000 Lead Poisoning Prevention and Control.

*Economic Outlook Quarterly Supplement*, February 1993.

Farquhar, Doug, J.D., Status of State Laws on Lead-Based Paint, Abatement, and Poisoning Prevention, *National Conference of State Legislatures*.

Illinois Lead Poisoning Prevention Act, Public Health and Safety, Chapter 111½, paragraphs 1301-1316.

Massachusetts Department of Public Health, Childhood Lead Poisoning Prevention Program. Guidance document regarding property transfer lead notification and disclosure under the Massachusetts Regulations for the Prevention and Control of Lead Poisoning 105 CMR 460.000.

National Association of Home Builders of the United States. *Forecast of Housing Activity*. NAHB, Washington, D.C., November 1992.

National Association of Home Builders of the United States. *Forecast of Housing Activity*. NAHB, Washington, D.C., January 1993.

National Association of Home Builders of the United States. *Housing Economics*. NAHB, Washington, D.C., February 1993.

National Association of Home Builders of the United States. *Profile of the Remodeler*. NAHB, Washington, D.C., January 1992.

Real Estate Transaction Disclosure Requirements from Delaware, California, Mississippi, Missouri, Oregon, Tennessee, Texas, and Wisconsin obtained from Doug Farquhar at the National Council of State Legislatures.

Real Estate Transfer Disclosure Statements from California, Oregon, New Hampshire, Minnesota, and Massachusetts obtained from Doug Farquhar at the National Council of State Legislatures.

Rhode Island Lead Poisoning Prevention Act, Chapter 24.6 § 15-16.

State of Maine, Department of Professional and Financial Regulation, Real Estate Commission. *Buyer/Seller Information*, 1990.

- State of Maine, Department of Professional and Financial Regulation, Real Estate Commission., *License Law and Rules Reference Book*, 1991.
- State of Rhode Island, *What Does the New Lead Law Mean to Me? Questions and Answers for Property Owners*. 1993.
- State of Rhode Island and Providence Plantations, Department of Health. *Rules and Regulations for Lead Poisoning Prevention*, R23-24.6-PB. February 1992 (E).
- Staples Office Superstore Catalog Supplement. April/May 1993.
- U.S. Department of Commerce. *County Business Patterns 1990 United States*. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Washington, D.C., January 1993.
- U.S. Department of Commerce. *County Business Patterns 1992 United States*. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Washington, D.C., January 1995.
- U.S. Department of Commerce. *Statistical Abstract of the United States 1994, 114th Edition*. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Washington, D.C., 1994.
- U.S. Department of Commerce. *Statistical Abstract of the United States 1992, 112th Edition*. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Washington, D.C., 1992.
- U.S. Department of Commerce. *U.S. Industrial Outlook 1992*, U.S. Department of Commerce, International Trade Administration, Washington, D.C., January 1992.
- U.S. Department of Commerce. *U.S. Industrial Outlook 1993*, U.S. Department of Commerce, International Trade Administration, Washington, D.C., January 1993.
- U.S. Department of Commerce. *U.S. Industrial Outlook 1994*, U.S. Department of Commerce, International Trade Administration, Washington, D.C., January 1994.
- U.S. Department of Housing and Urban Development. *Comprehensive Workable Plan for the Abatement of Lead-Based Paint in Privately Owned Housing: Report to Congress*, U.S. Department of Housing and Urban Development, Washington, D.C., December 1990.
- U.S. Department of Labor. *Employment and Earnings*, Vol. 40, No. 2, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., February 1993.
- U.S. Department of Labor. *Employment and Earnings*, Vol. 42, No. 1, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., January 1995.
- U.S. Department of Labor. *Occupational Outlook Quarterly*, Vol. 36, No. 1, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., Spring 1992.
- U.S. Department of Labor. *Occupational Projections and Training Data, 1992 Edition*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., May 1992.

U.S. Department of Labor. *Occupational Projections and Training Data, 1994 Edition*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., May 1994.

U.S. Department of Labor. *Occupational Wage Survey: Hospitals, January 1991*. Bulletin 2392, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., January 1992.

U.S. Department of Labor. *The 1992-2005 Job Outlook in Brief*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., Spring 1994.

U.S. Department of Labor. *The American Work Force: 1992-2005*, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., April 1994.

*Value Line Investment Survey, Edition 6*, Part 3, Ratings & Reports, Vol. L, No. 32, April 21, 1995 and *Edition 8*, Part 3, Ratings & Reports, Vol. L, No. 34, May 5, 1995. Value Line Publishing, Inc., New York, NY.

#### **PERSONAL COMMUNICATIONS**

Amirault, Tom (*Occupation Outlook Quarterly*, Bureau of Labor Statistics, Washington, D.C.). Personal communication, 1993.

Attorney General's Office (Sacramento, CA). Personal communication, 1993.

Ball, Terry (Attorney General's Office, Jefferson City, MO). Personal communication, 1993.

Biland, Larry, EPA Region 9 office. Personal communication, 1993.

Bowes, Bob (Scanlan & Bowes Real Estate, Arlington, MA). Personal communication, 1993.

Century 21 Gallagher Realty, W. Roxbury, MA (no name). Personal communication, 1993.

Commercial Investment Real Estate Institute (Chicago, IL). Personal communication, 1993.

Conway, Joy (Rental Housing Assn., Greater Boston Real Estate Board). Personal communication, 1993.

Cook, Stephen (South Shore Home Inspection, Braintree, MA). Personal communication, 1993.

Dindal, Ann (Greater Boston Real Estate Board). Personal communication, 1993.

Dundulis, Bill (Assistant, Environmental Health and Risk Assessment, Providence, RI). Personal communication, 1993.

Goldstein, Susan. Massachusetts Conveyance Association, Boston. Personal communication, 1993.

Jones, Edna (Coordinator, Childhood Lead Poisoning Prevention Program, Augusta, ME). Personal communication, 1993.

Jordan, Carl (analyst, Small Business Administration, Boston, MA). Personal communication, 1993.

Kiley, Kevin (Executive Vice President of State Legislative and Regulatory Policy for Massachusetts Bankers Association). Personal communication, 1993.

Le Vaux, Jean (Prudential Le Vaux Properties, Cambridge, MA). Personal communication, 1993.

Mahoney, John, Realty Collaborative (West Roxbury, MA). Personal communication, 1993.

Mahoney, Mathew (Housing Environmental Services, Inc., Cambridge, MA). Personal communication, 1993.

Massachusetts Bar Association (Boston, MA). Personal communication, 1993.

National Association of Home Builders of the United States, Washington, D.C. Personal communication, 1993.

National Association of Realtors, Chicago, IL (reference librarians). Personal communication, 1993.

National Mortgage Bankers Association., Washington, D.C. Personal communication, 1993.

Riley, Jack (Executive Director, Continuing Legal Education [MCLE], Boston). Personal communication, 1993.

Ruffo, David (Ruffo Management, Brighton, MA). Personal communication, 1993.

Schlag, Bob (Acting Chief, Childhood Lead Poisoning Prevention Program, Sacramento, CA). Personal communication, 1993. .

Shortsleeve, Mrs. (Pleasant Realty, Jamaica Plain, MA). Personal communication, 1993.

Shortsleeves, Dave (Century 21 Regional Office, Boston, MA). Personal communication, 1993.

Social Law Library, Boston (reference librarian). Personal communication, 1993.

South, Linda (National Assn. of Real Estate License Law Officials, Salt Lake City, UT). Personal communication, 1993.

Staples Office Superstore, price validation for filing cabinets and photocopying services, June 1995.

Steinbergh, Alex (Resource Capital Group, Cambridge, MA). Rental Property Owner and Property Management Firm. Personal communication, 1993.

Turifer, Delores (Bureau of Labor Statistics, Washington, DC). Personal communication, 1993.

Vagar, Caryl (Century 21 Baily Realty, Newton, MA). Personal communication, 1993.

Vandenbroucke, David A. (Department of Housing and Urban Development), personal communication., March 1, 1993.

Vanderslice, Bob (Program Chief, Environmental Health and Risk Assessment, Providence, RI). Personal communication, 1993.

Wittenbourg, Peter (Kaye, Fialkow, Richmond and Rothstein law firm, Boston). Personal communication, 1993.